A BREIF
Natural Hiſtory

Intermixed with variety

OF

Philoſophical Diſcourſes;

And obſervations of the burnings of Mount ÆTNA.

WITH

REFUTATIONS

Of ſuch

VULGAR ERROURS

As our Modern Authors have omitted.

By *Eugenius Philalethes.*

Vaughan (T.)

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THE EPISTLE TO THE READER.

I Presume I shall no sooner appear upon the Stage I am prepared for, but I must without evasion expect to be assaulted by that furious and inconsiderate Monster called Censour; whose lashes I will receive

with the ſame ſlight concern, the *Lacedemonians* did the cruelty of their Correctors, ſporting themſelves whilſt their backs were torn with the unmerciful Whip. Of that efficacy is Reſolution, that it preſents pain but meer Opinion, and values a ſcoffing *Lucian*, or a ſatyrical *Memphus*, no more then a harmleſs *Helleſpont* did the vain threats of a proud *Xerxes*. *Seneca* ſaith well, better *aliud agere quam nihil*, for Idleneſs

Idleneſs is the Devils opportunity: the Conſiderations of which (with my aſſent to the Judgment of *Thucidides*, who ſayes, To know a thing and not to expreſs it, is all one as thongh he knew it not) made me to expoſe my ſelf to publick view. My Subject is good and great, called by the Name of *Nature*; here I preſent her, expreſſing mans Ingratitude, who is fit to ſtrip her of thoſe Robes of Priviledge

that God himself hath endowed her with, not considering that what she acts, is by the vertue of his Power, and that She is one of those Mirrours that represents him to us, which a Philosophick Passion adores as the supream Efficient. But indeed, how can She expect our Veneration, till we have divested our selves of that prejudice ignorance possesses us with, which must be done by a serious reflex upon her Effects,

as this little Volumn will acquaint you, if you read it with an impartial and unbyased Reason; for I have, as all others of the same Inclination must do, used Philosophy as the Telescope by which we must make our Observations, as you will, when you see, find my curiosity descending to little Insects, and that with wonder at their production out of Corruption; from thence I view her care in beautifying this little Globe

we live in, with Robes ſutable to every Seaſon; and when I aſcend the lower Region, and mark the Clouds ranging themſelves in ſuch bodies as though they intended another Deluge, it occaſions wonder; ſo likewiſe the coldneſs of the middle Region with the heat of the upper, and the Element of Fire, muſt be Miracles to ignorance. And if we obſerve the *Moon*, with the Motion attending that of the Seas flux and reflux

flux, it would make us judge, that there is ſome ſecret contract made *ab Origine* betwixt her and the watery Element. *Mercury* and *Venus* I have ſpoken of in their places: the next that preſents us with cauſe of Admiration, is the glorious *Sun*, the Luminary of the Univerſe, called by ſome, and not improperly, the *Anima Mundi*, for we find her approach gives life to Vegitives, ſenſe to Animals, and almoſt a new Nature to Rationals

onals. As for *Mars*, *Jupiter*, and *Saturn*, the Eighth *Sphere*, and *Chriſtalline* Heaven, & the *Empyreum*, I have treated on, if not like a knowing Secretary of Nature, yet a ſubmiſs Admirer of her. And whereas I make a refutation of Errours, as an addition to my Title, ſome perhaps will ſay, I am like the Tinker, that for ſtopping of one hole make two, or for my refuting of one Errour, I have made two; it may be I have

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in the Opinion of ſome: But whether I have or no, who ſhall be judge? for what appears an Errour to one, is to another a very evident truth: ſometimes a Week or a Day, nay an hour puts a change upon an Opinion of many years ſtanding. But let my Errours be as great and as many as I pretend to correct, Reaſon ſhall convince me, and command my Acknowledgment; for it's our Errours that preſents us human. I

have

have writ this to give Satisfaction to others if I can; but if not, howſoever I have ſecured it to my ſelf; And let the Reader judge of it as it pleaſes him. I have writ that which delights me; And if envie cauſe a miſapplication of my intention, it matters not, the contempt of it will make me bold to ſay, I value it and thee after the rate as thou doſt it and me.

The aſſertions here laid down are plain and perſpicuous,

ous, convincing and ſatisfactory to the intelligent. But I know that common prejudice which is uſually taken of any thing (though never ſo true) which is contrary to any mans belief, it does beget ſuch Paſſion and animoſity, *&c.* and makes ſuch a breach as is hardly to be repaired. And ſince our own Opinion may make it diſputable what reaſon we have to pretend to convince another by, I ſhall only offer this

this for common satisfaction, that things demonstrable are the most evident marks of Truth; and that they are so clearly manifested in this little Book, deserves nothing but sobriety and moderation, and a well weighing of the matter herein contained. Reader, I am loth to leave thee, but that I would not keep thee from the Book it self, which I hope will be to thy ample satisfaction, &c.

Vale.

Eugenius Philalethes.

A Brief

Natural History

Intermixed

With variety of Philosophical Discourses, &c.

GOD by his presential Essence gives unto all things an Essence; so that if he should withdraw himself from them, as out of Nothing they were first made, so into Nothing they would be again resolved. In the preservation then of the Creature, we are not to consider so much the impotency and weakness thereof, as the

goodneſs, wiſdom, and power of the Creator, in whom, and by whom, and for whom, they live, move, and have their being. *The ſpirit of the Lord filleth the world*, ſaith the Author of the *Wiſdom of Solomon*; and the ſecret working of the Spirit, which thus pierceth through all things, as *Virgil Æneid 6.* hath excellently expreſt,

Principio cœlum ac terras campoſque Liquentes,
Lucentemque globum Lunæ, Titaniaq; aſtra,
Spiritus intus alit, totamque infuſa per artus,
Mens agitat molem & magno ſe corpore miſcet.

The Heavens, the Earth, and all the Liquid Main,
The Moons bright Globe and Stars *Titanian*;
A Spirit within maintains, and their whole Maſs
A Mind, which through each part infus'd doth paſs,
Faſhions and works and wholly doth tranſpierce
All this great body of the Univerſe.

The Spirit the *Platoniſts* call the Soul of the World; by it, it is in ſome ſort quickned and formalized, as the body of Man is by its reaſonable Soul. There is no queſtion then, but that

that this Soul of the World, (if we may ſo ſpeak with reverence) being in truth no other then the immortal ſpirit of the Creator, is able for to make the Body of the World Immortal, and to preſerve it from Diſſolution, as he doth the Angels, and the ſpirits of men, were it not, that he hath determined to diſſolve it by the ſame ſupernatural and extraordinary Power, by which at the firſt he gave it exiſtence. For my own part I conſtantly believe that it had a beginning, and ſhall have an ending; and judg him not worthy of the name of a Chriſtian, who is not of the ſame mind: yet ſo as I believe both to be matter of Faith; *Through Faith we underſtand that the Worlds were framed by the Word of God*, *Heb.* 11. 3. And through the ſame Faith we underſtand likewiſe, that they ſhall be again unframed by the ſame Word. Reaſon may grope at this truth in the dark; howbeit, it can never clearly apprehend it, till it be enlightned by the bright beams of Faith. Though I deny not but that it is probable, though not demonſtrative, and convincing Arguments may be drawn from the diſcourſe of Reaſon to prove either the one or the other.

I remember the Philoſophers propoſe a queſtion, *Utrum Mundus ſolo generali concurſu Dei perpetuo durare poſſit?* and for the moſt part they conclude it affirmatively, even ſuch as

profeſſed the Chriſtian Religion, and for the proof of this aſſertion, they bring in effect this reaſon. The Heavens, ſay they, are of a nature which is not capable of it ſelf of corruption; the loſs of the Elements is recovered by compenſation, of mixt bodies without Life by accretion, of living bodies by ſucceſſion, the fall of the one being the riſe of the other: as *Rome* triumphed in the ruines of *Alba*, and the depreſſion of one Scale is the elevation of another; according to that of *Solomon*, *One generation paſſeth away, and another generation cometh, but the Earth abideth for ever*, Eccleſ. 1. 4.

Again, all Subcœleſtial Bodies (as is evident) conſiſt of Matter and Form; now the firſt Matter having nothing contrary unto it, cannot by the force of Nature be deſtroyed; and being Created immediately by God, it cannot be aboliſhed by any inferiour Agent. And as for the Forms of Natural Bodies, no ſooner doth any one abandon the Matter it informed, but another inſtantly ſteps into the place thereof; no ſooner hath one acted his part and is retired, but another preſently comes forth upon the Stage, though it may be in a different ſhape, and to act a different part; ſo that no proportion of Matter is, or at any time can be altogether void and empty; but like *Vertumnes* or *Proteus* it turns it ſelf into a thouſand Shapes, and is alwayes ſupplied and furniſhed with one Form

Form or other, by a power Divine above Nature: but to proceed, ſuch and ſo great is the Wiſdom, the Bounty, and the Omnipotence which God hath expreſſed in the Frame of the Heavens, that the *Pſalmiſt* might juſtly ſay, *The Heavens declare the glory of God*, *Pſal.* 19. 1. The Sun, and the Moon, and the Stars ſerving as ſo many Silver and Golden Characters, embroidered upon azure for the daily Preaching and Publiſhing therefore to the World. And ſurely if he have made the floor of this great houſe ſo beautiful, and garniſhed it with ſuch wonderful variety of Beaſts, of Trees, of Herbs, of Flowers, we need wonder the leſs at the Magnificence of the Roof, which is the higheſt part of the World, and the neareſt to the Manſion Houſe of Saints and Angels. Now as the excellency of theſe bodies appear in their Situation, their Matter, their Magnitude, and their Spherical and Circular Figure; ſo ſpecially in their great uſe and efficacy; not only that they are for Signes and Seaſons and for Days and Years; but in that by their Motion, their Light, their warmth, and Influence, they guide and govern, nay cherish and maintain, breed and beget theſe Inferiour Bodies, even of Man himſelf, for whoſe ſake the Heavens were made. It is truly ſaid of the Prince of Philoſophers, *Sol & homo generunt hominem*, the Sun and Man beget Man: Man concurring

in the generation of Man as an immediate, and the Sun as a remote cauſe. And in another place he doubts not to affirm of this inferiour World in general, *Neceſſe eſt Mundum inferiorem ſuperioribus lationibus continuari, ut omnis inde Virtus derivetur:* It is requiſite, that theſe inferiour parts of the World ſhould be co-joyned to the Motions of the higher Bodies, that ſo all their Virtue and vigour might be from thence derived.

There is no queſtion but the Heavens have a marvellous great ſtroak upon the Air, the Water, the Earth, the Plants, the Metals, the Beaſts, and upon Man himſelf, at leaſt wiſe in regard of his body and natural faculties. To let paſs the quailing and withering of all things by their receſs, and their reviving and reſurrection, (as it were) by the reacceſs of the Sun. I am of opinion, that the ſap of the trees ſo preciſely follows the motion of the Sun, that it never reſts, but is in a continual agitation, as the Sun it ſelf: which no ſooner arrives at the *Tropick*, but he inſtantly returns, and even at the very inſtant (as I conceive) and I think it may be demonſtrated by experimental Concluſions) the ſap which by degrees deſcended with the declination of the Sun, begins to remove at the approach thereof, by the ſame ſteps that it deſcended: And as the approach of the Sun is ſcarce ſenſible at his firſt

return

return, but afterwards the day increaſes more in one week, than before in two; in like manner alſo fares it with the Sap, in Plants, which at the firſt aſcends up inſenſibly and ſlowly, but within a while much more ſwiftly and apparently. It is certain that the *Tulip*, *Marigold*, and *Sun-flower* open with the riſing, and ſhut with the ſetting of the Sun; ſo that though the Sun appear not, a man may more infallibly know when it is high noon by their full ſpreading, then by the Index of a Clock or Watch. The *Hop* in its growing windeth it ſelf about the Pole, always following the courſe of the Sun from Eaſt to Weſt, and can by no means be drawn to the contrary, chooſing rather to break then yield.

It is obſerved, by thoſe that Sayl between the *Tropicks*, that there is a conſtant ſet Wind, blowing from the Eaſt to the Weſt, Saylers call it the *Breeze*, which riſes and falls with the Sun, and is always higheſt at noon; and is commonly ſo ſtrong, partly by its own blowing, and partly by over-ruling the Currant, that they who ſayl to *Peru*, cannot well return the ſame way they came forth: And generally Marriners do obſerve, that *cæteris paribus*, they ſayl with more ſpeed from the Eaſt to the Weſt, then back again from the Weſt to the Eaſt, in the ſame compaſs of time. All which ſhould argue a wheeling about of the Air, and

Waters by the diurnal Motion of the Heavens, and especial by the motion of the Sun. Whereunto may be added, that high-Sea springs of the year, are always nearer about the two *Æquinoctials* and *Solstices*; and the *Cock* as a trusty Watchman, both at midnight and break of day, gives notice of the Suns approach.

These be the strange and secret effects of the Sun, upon the inferiour Bodys; whence by the *Gentiles* he was held the visible God of the World: and termed the Eye thereof, which alone saw all things in the World, and by which the World saw all things in it self.

Omnia qui videt, & per quem videt omnia Mundus.

And most notably it is described by the *Psalmist*, *in them hath he set a Tabernacle for the Sun, which is as a Bridegroom coming out of his Chambers, and rejoyceth as a strong man to run a race, his going forth is from the beginning of the Heaven, and his Circuite to the end of it, and there is nothing hid from the heat thereof*, Psal. 19 5,6.

Now as the effects of the Sun, the head-spring of Light and warmth, are upon these inferiour Bodies more active, so those of the *Moon* (as being *Ultima cæli, Citima terris*, nearer the Earth, and holding a greater resemblance

blance therewith) are no leſs Manifeſt. And therefore the Husbandman in ſowing and ſetting, grafting, and planting, lopping of Trees, and telling of Timber, and the like, upon good reaſon obſerves the waxing and waining of the *Moon*, which Learned *Zanchius* in his *Operibus Dei*, well allows of; commending *Heſiod* for his rules therein, *Quod ex Lunæ decrementis & incrementis totius agricolationis ſigna notet, quis improbet?* who can miſlike it that *Heſiod* ſets down the ſigns, in the whole courſe of Husbandry, from the waxing and waining of the *Moon*: the Tides and ebbs of the Sea follow the courſe of it, ſo exactly, as the Sea-men will tell you the age of the *Moon* only by the ſight of the Tide as certainly, as if he ſaw it in the water. It is the obſervation of *Ariſtotle* and *Pliny* out of him, That *Oyſters*, *Muſſels*, *Cockles*, *Lobſters*, *Crabbs*, *&c.* and generally all Shell-fiſh grow fuller in the increaſe of the *Moon*, but emptier in the decreaſe thereof. Such a ſtrong predominancy it hath upon the Brain of Man, that *Lunaticks* borrow their very name from it; as alſo doth the Stone *Selenites*; whoſe property, as St. *Auguſtine* and *Georgius Agricola* records it, is to increaſe and decreaſe in Light with the *Moon*, carrying always the reſemblance thereof with it ſelf. Neither can it reaſonably be imagined, that other Planets, and Stars, and parts of Hea-

ven,

ven, are without their forcible operations upon theſe lower Bodies, ſpecially conſidering that the very Plants and Herbs of the Earth, which we tread upon, have their ſeveral vertues, as well ſingle by themſelves, as in compoſition with other ingredients. The Phyſitian in opening of a Vein, hath ever an eye to the Sign then reigning. The *Canicular* Star, eſpecially in thoſe hotter Climates, was by the Ancients always held a dangerous Enemy to the practiſe of Phyſick, and all kind of Evacuations. Nay, *Galen* himſelf, the *Oracle* of that profeſſion, adviſeth practitioners in that Art, in all their cures, to have a ſpecial regard to the reigning Conſtellations and Conjunctions of the Planets. But the moſt admirable miſtery of Nature, in my Mind, is the turning of Iron touched with the Load-ſtone towards the North Pole; (of which I ſhall have occaſion to diſcourſe more largely hereafter in another Tract,) neither were it hard to add much more to that which hath been ſaid, to ſhew the dependance of theſe Elementary Bodies upon the Heavenly: Almighty God having ordained, that the higher ſhould ſerve as intermediate Agents, or ſecondary Cauſes: but ſo, as in the Wheels of a Clock; though the failing of the Superiour, cannot but cauſe a failing in the Inferiour, yet the failing of the Inferiour, may well argue

ſome-

ſomewhat for it ſelf, though it cannot cauſe a failing in the Superiour. We have great Reaſon then, as I conceive, to begin with the examination of the State of Cœleſtial Bodies, inasmuch as upon them the condition of the ſubcœleſtial depends. Wherein five things will offer themſelves to our conſideration, their Subſtance, their Motion, their Light, their Warmth, and their Influence. That the Heavens are endued with ſome kind of Matter; though ſome Philoſophers in their jangling humours, have made a doubt of it, yet I think no ſober and wiſe Chriſtian will deny it: But whether the Matter of it be the ſame with that of theſe inferiour Bodies, *adhuc ſub Judice lis eſt*, it hath been and ſtill is a great queſtion among Divines. The Ancient Fathers and Doctors of the Primitive Church for the moſt part following *Plato*, hold that it agrees with the nature of the Elementary Bodies, yet ſo as it is compounded of the fineſt flower, and choiceſt delicacy of the Elements: But the *Schoolmen* on the one ſide, that follow *Ariſtotle*, adhere to his Quinteſſence, and by no means will be beaten from it, ſince, ſay they, If the Elements and the Heavens ſhould agree in the ſame Matter, it ſhould conſequently follow, that there ſhould be a mutual Traffique and Commerce, a reciprocal Action and Paſſion between them, which would ſoon draw

draw on a change, and by degrees a ruine upon those glorious Bodies. Now though this point will never (I think) be fully and finally determined, till we come to be inhabitants of that place, whereof we dispute; (for hardly do we guess aright at things that are upon Earth. *) And with labour do we find the things that are at hand; but the things that are in Heaven, who hath searched out? Wisd. 9. 16.* Yet for the present, I should state it thus, that they agree in the same Original Matter; and surely *Moses*, methinks, seems to favour this opinion, making but one Matter, (as far as I can gather from the Text) out of which all bodily substances were Created.

Unus erat toto vultus in Orbe.
Ovid 1. *Mitam.*

So as the Heavens though they be not compounded of the Elements, yet are they made of the same Matter that the Elements are compounded of; They are not subject to the qualities of heat, cold, or drought, or moisture, nor yet to weight, or lightness, which arise from those qualities, but have a Form given them, which differeth from the Forms of all corruptible Bodies, so as it suffereth not, nor can it suffer from any of them, being so excellent and perfect in it self, as it wholly satiateth

ſatiateth the appetite of the Matter that it informeth. The Cœleſtial Bodies then, meeting with ſo noble a Form to actuate them, are not, nor cannot, in the courſe of Nature, be lyable to any Generation or Corruption, in regard of their Subſtance; to any augmentation or diminution, in regard of their quantity; no nor any obſtructive alteration, in reſpect of their qualities.

I am not ignorant that the controverſies touching the Form, what it ſhould be, is no leſs then touching the Matter; ſome holding it to be a living and an quickning Spirit, nay a ſenſitive and rational Soul; which opinion is ſtiffly maintained by many great and learned Clerks, both *Jews* and *Gentiles*, and *Chriſtians*, ſuppoſing it unreaſonable that the Heavens which impart life to other Bodies, ſhould themſelves be deſtitute of Life: But this Errour is notably diſcovered and confuted by *Claudius Eſpenatus*, a famous Doctor of *Sorbone*, in a Treatiſe which he purpoſely compoſed on that point *de Cælorum animatione*; In as much as what is denied thoſe bodies in Life, in Senſe, in Reaſon, is abundantly ſupplied in their conſtant and unchangeable duration, ariſing from that inviolable knot & indiſſoluble Marriage, betwixt the Matter and the Form, which can never ſuffer any Divorce, but from that hand which firſt joyned them. And howbeit it cannot

cannot be denyed, that not only the reaſonable Soul of Man, but the ſenſitive of the leaſt Gnat that flies in the Air, and the vegetative of the baſeſt Plant that ſprings out of the Earth, are (in that they are indued with Life) more Divine, and nearer approaching the Fountain of Life, then the Formes of the Heavenly Bodies; yet as the Apoſtle ſpeaketh of Faith, Hope, and Charity, concludes Charity to be the greateſt, (though by Faith we do apprehend and apply the merits of Chriſt) becauſe it is more univerſal in operation, and laſting in duration; ſo though the Formes of the Creatures endued with Life, do in that regard, come a ſtep nearer to the Deity, then the Formes of the Heavenly Bodies, which are without Life; yet if we regard their purity, their beauty, their efficacy, their indeficiency in moving, their univerſallity and independency in working, there is no queſtion, but that the Heavens may in that reſpect be preferred, even before Man himſelf, for whoſe ſake they were made; Man being indeed Immortal, in regard of his Soul, but the Heavens in regard of their Bodies, as being made of an incorruptible ſtuff.

Which cannot well ſtand with their opinion, who held them to be compos'd of Fire, or the Waters, which in the firſt of *Geneſis are ſaid to be above the Firmament*, and in the hundred

hundred forty eight *Pſalm*, *Above the Heavens*, are above the Heavens we now treat of, for the tempering and qualifying of their heat, as did *St. Ambroſe*, and *St. Auguſtine* hold, and many others, venerable for their Antiquity, Learning, and Piety. Touching the former of which Opinions, we ſhall have fitter opportunity to diſcourſe, when we come to Treat of the warmth cauſed by the Heavens. But touching the Second, it ſeems to have been grounded upon a miſtake of the Word Firmament, which by the Ancients was commonly appropriated to the eighth Sphere, in which are ſeated the fixed Starrs; whereas the Original *Hebrew* (which properly ſignifies *Extention*, or *Expanſion*) In the firſt of *Geneſis*, is not only applied to the Spheres in which the *Sun* and *Moon* are planted, but to the loweſt Region of the Air, in which the Birds flie; and ſo do I with *Pareus* and *Pererius*, take it to be underſtood in this controverſie. This Region of the Air being, as *St. Auguſtine* ſomewhere ſpeaks, *Terminus intranſgreſſibilis*, a firme and irremoveable wall of ſeperation betwixt the waters that are bred in the bowels of the Earth, and thoſe of the Clouds. And for the Word Heaven, which is uſed in the hundred forty-eighth *Pſalm*, it is likewiſe applied to the middle Region of the Air, by the Prophet *Jeremy*, *Jer.* 10. 13. Which may ſerve for a Gloſs upon

upon the Text alleaged out of the *Pſalm*, *When he uttereth his voice, there is a noiſe of the waters in the Heavens, and he cauſeth the vapours to aſcend from the ends of the Earth.*

Now, the *Schoolmen* finding that the placing of the waters above the Starry Heavens, was both unnatural and unuſeful, and yet not being well acquainted with the propriety of the *Hebrew* Word, to ſalve the matter, tell us of a *Chriſtalize* or glaſſie Heaven, above the eight Sphere, which ſay they, is undoubtedly the waters above the firmament, mentioned by *Moſes*; which expoſition of theirs, doth croſs the courſe of *Moſes* his Hiſtorical Narration, his purpoſe being as it ſeems, only to write the Hiſtory of things which were viſible and ſenſible, as appeareth in part by his omitting the Creation of Angels; whereas the *Chriſtaline* Heaven they ſpeak of, is not only inviſible and inſenſible, but was not at all diſcovered to be, till the days of *Hipparchus* or *Ptolomy*.

And as for the freſh luſtre and brightneſs wherewith, as is commonly thought, the Heavens ſhall be renewed at the laſt day, as a garment by the turning is changed, and by changing refreſhed, it may be well by the making them more reſplendent then now they are, or ever at any time were ſince their firſt Creation, not by the ſcowring of contracted ruſt, but adding

ding a new gloſs and augmentation of glory. And whereas ſome Authors have not doubted to make the ſpots and ſhadows appearing in the face of the *Moon* to be unredoubted arguments of that contracted ruſt; if theſe ſpots had not been original and native, of equal date with the *Moon* her ſelf, but had been contracted by the continuance of time, as wrinkles are in the moſt beautiful faces, they had ſaid ſomewhat, but that they were above fifteen hundred years agoe, appeareth by *Plutarch's* diſcourſe *de Maculis in facie Lunæ*; and that they have any whit ſince increaſed, it cannot be ſufficiently proved. Perchance by the help of the late invented perſpective-glaſs, they have been more clearly and diſtinctly diſcerned then in former ages, but that proves no more that they were not there before, then that the *Sydera Medcæa*, lately diſcovered by the vertue of the ſame Inſtruments, were not before in being, which the diſcoverers themſelves knew well enough they could not with any colour of reaſon affirm.

Howbeit it cannot be denyed, but that new Stars have at times appeared in the Firmament: as ſome think, that was at our Saviours Birth; in as much as it appointed out the very Houſe in which he was born, by ſtanding over it, and was not (for ought we find) obſerved by the *Mathematicians* of thoſe

times; I would rather think it to be a blazing Light created in the Region of the Air, carrying the reſemblance of a Star, ſeated in the Firmament.

As for that which appeared in *Caſſiopæa* in the year One thouſand five hundred and ſeventy two, (the very year of the great Maſſacre in *France*) I think it cannot well be gainſaid to have been a true Star, it being obſerved by the moſt skillful and famous *Aſtronomers* of that time, to hold the ſame Aſpect in all places in Chriſtendom, to run the ſame courſe, to keep the ſame proportion, diſtance, and ſituation, every-where, and in every point, with the fixed Stars, for the ſpace of two whole years. But this I take not to have been the effect of Nature, but the Supernatural and miraculous work of Almighty God, the firſt Author and free diſpoſer of Nature. And the like may be ſaid of all ſuch *Comets* which have at any time evidently appeared, (if any ſuch evidence can be given) to be above the Globe of the *Moon*.

St. *Auguſtine* in his *de Civitate Dei*, reports of *Varro's* book entituled *de Gente Populi Romani*; and he out of *Caſtor*, touching the Planet *Venus*, which to add the greater weight and credit to the relation, being ſomewhat ſtrange and rare, I will ſet it down in the very words of *Varro*, as I find them quoted by St. *Auguſtine*,

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in cœlo mirabile extitit portentum, nam in Stella Veneris nobilissima, quam Plautus vesperuginem, Homerus Hesperon appellat, pulcherimam dicent : Castor scribit tantum portentum extitisse, ut mutaret colorem, magnitudinem & figuram, cursum, quod factum ita neque antea, neque postea sit, hoc factum Ogyge Rege dicebant Adrastus, Cyzicenus, & Dyon Neapolites, Mathematici Nobiles, saith he, appeared a marvellous great wonder, the most noted Star cal'd *Venus*, which *Plautus* calls *Vesperugo*, and *Homer Vesperus* the fair, as *Castor* hath left upon Record, changed both colour, and bigness, figure and motion, which accident was never seen before, nor since that time; the renouned Mathematicians *Adrastus* and *Dion* averring, that this fell out during the Reign of King *Ogyges*; which wonder, neither *Varro* nor *Augustine* ascribe to the changeable matter of the Heavens, but to the unchangeable will of the Creator. And therefore the one calls it as we see *mirabile portentum*, and the other makes this Comment upon it, that it happened, *quia ille voluit qui summo regit imperio ac potestate quod condidit*, because he would have it so, who governs all things that he hath made, with a Soveraign independing Power. So that two special reasons may be rendred for these extraordinary unusual Apparitions in Heaven; the one that they may declare to the World that they have a Creatour and Commander, who

can alter and deſtroy their Natures, reſtrain or ſuſpend their operations at his pleaſure, which ſhould keep men from worſhiping them as Gods, ſince they cannot keep themſelves from alteration. The other to portend and foreſhew his Judgments, as did that new Star in *Caſſopaia*, a moſt unnatural inundation of Blood in *France*; And this change in *Venus*, ſuch a Deluge in *Achaia*, as it overflowed, and ſo waſted the whole Country, that for the ſpace of Two hundred years after, it was not Inhabited. It will next fall to our task to Diſcover of the Eclipſes, of which *Virgil*, in his *Georg. Lib.* 2. Calls,

Defectus Solis varios Lunaque Labores.
Defects and travels of the *Sun* and *Moon*.

As alſo the manner of the Ancient *Romans* while ſuch Eclipſes laſted; who as *Tacitus* in his *Annals* ſaith, *Lib.* 7. Did uſe to lift up burning Torches towards Heaven, and withal to beat pans of Braſs and Baſons, as we do in following of a ſwarm of Bees. So *Boetius*, *Lib.* 4. *Met.*

Commovet Gentes publicus Error,
Laſſantque crebris pulſibus æra.

A Common Error through the world doth paſs,
And many a ſtroke they lay on pans of Braſs.

And *Manilius* ſpeaking of the appearance of the *Moons* Eclipſe by degrees, in diverſe parts of the Earth, in his *Lib.* 1.

Straque in extremis quatiuntur gentibus æra.

The utmoſt Coaſts do beat their Braſs pans Laſt.

And *Juvenal* the *Satyriſt* wittily deſcribing a tatling Goſſhip in his *Lib.* 2. *Sat.* 6.

Una laboranti poterit ſuccurrere Lunæ.

She only were enough to help
The Labours of the *Moon*.

They thought thereby they did the *Moon* great eaſe, and helped her in her Labour; as *Plutarch* in his Life of *Æmilius* obſerveth: That *Æmilius* himſelf a wiſe man, as the ſame

ſame Author there Witneſſeth, did congratulate the *Moons* delivery from an Eccliplſe with a ſolemn Sacrifice, as ſoon as ſhe ſhined out bright again; which action of his, that prudent Philoſopher and ſage Hiſtorian, doth not only relate, but approve and commendeth it as a ſign of godlineſs and devotion; yea this Heathenish and Sottiſh cuſtom of relieving the *Moon* in this caſe by noiſe and out-cries, the Chriſtians it ſeems borrowed from the *Gentiles*, as *St. Ambroſe* expreſſes in his *Ser.* 83. And *Maximus Turrinenſis* hath a Homile to the ſame purpoſe. Whereas *Ariſtotle* in his eighth Book of his *Metaphyſicks*, makes it plainly to appear, That the *Moon* ſuffereth nothing by her Eccliplſe; where alſo he evidenceth by reaſon, that it is cauſed by the ſhadow of the Earth, interpoſed betwixt the *Sun* and the *Moon*: as in exchange or revenge thereof (as *Pliny* ſpeaketh) the Eccliplſe of the *Sun* is cauſed by the Interpoſition of the *Moon*, betwixt the Earth and it. The *Moon* ſo depriving the Earth; and again, the Earth, the *Moon* of the beams of the *Sun*: which is the true cauſe, that in the courſe of Nature, the *Moon* is never Eccliplſed but when ſhe is Full, the *Sun* and She being then in oppoſition; nor the *Sun*, but when it is New *Moon*; thoſe two Planers being then in Conjunction: I ſay, in the courſe of Nature; for the Eccliplſe

at our Saviours Paſſion, was undoubtedly Supernatural: *Quam ſolis obſcurationem non ex canonico ſyderum curſu accidiſſe ſatis oſtenditur, quod tunc erat Paſcha Judeorum, nam plena Luna ſolemniter, agitur,* ſaith *St. Auguſtin Lib. 3. Civit. Dei, cap. 15.* It is evident, that that Eclipſe of the *Sun* happened not by an ordinary and orderly courſe of the Starrs, it being then the Paſſover of the *Jews*, which was ſolemnized at the Full *Moon*; And this was it, that gave occaſion, as is commonly believed, to that memorable exclamation of *Dennys* the *Areopagite*, being then in *Egypt*, *Aut Deus Naturæ patitur, aut Machina Mundi diſſolvetur*; Either the God of Nature ſuffers, or the Frame of the World will be diſſolved. And hereupon too, as it is thought by ſome, was erected the Altar at *Athens*, *Ignoto Deo*, *To the unknown God*, *Act.* 17. 23. Though others think, that this Eclipſe was confined, in the borders of *Judæa*; howſoever it cannot be denyed, but that it was certainly beſides and above the compaſs of Nature. Neither ought it to ſeem ſtrange, That the *Sun* in the Firmament of Heaven ſhould appear to ſuffer, when the Sun of Righteouſneſs indeed Suffered upon the Earth.

But for other Eccliplſes, though the cauſes be not commonly known, yet the ignorance of them was it which cauſed ſo much Superſtition

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in former Ages, and left that impreſſion in mens minds, as even at this day, wiſe men can hardly be perſwaded, but that thoſe Planets ſuffer in their Eccliples, which in the *Sun* is moſt childiſh and ridiculous to imagine; ſince in it ſelf, it is not ſo much as deprived of any Light, nor in truth can be; it being the Fountain of Light, from which all other Starrs borrow their Light, but pay nothing back again to it, by way of retribution. Which was well expreſſed by *Pericles*, as *Plutarch* in his Life reports it, for there happening an Eccliple of the *Sun*, at the very inſtant when his Navy was ready to Lanch forth, and himſelf was imbarked; his followers began much to be appald at it, but eſpecially the Maſter of his own Gally, which *Pericles* perceiving, takes his Cloak, and therewith hoodwinks the Maſters eyes, and then demands of him, what danger was in that, he anſwering none, Neither ſaid *Pericles* is there in this Eccliple; there being no difference betwixt that Vail and my Cloak, with which the *Sun* is covered, but only in bigneſs. And the truth is that the *Sun* then ſuffered no more by the intervening of the *Moon*, then from *Pericles* Cloak, or daily doth from the Clouds in the Air, which hinder the ſight of it; or by the interpoſing of the Planet *Mercury*, which hath ſometimes appeared as a ſpot in it. But whether

whether theſe Eccliplſes either cauſe or preſage any change in theſe inferiour Bodies, I ſhall have fitter occaſion to examine hereafter; and ſo I paſs from the Conſideration of the ſubſtance, to the Motion of the Heavenly Bodies.

Motion is ſo univerſal and innate a property, and ſo proper an affection to all Natural Bodies, that the great Philoſopher knew not better how to define Nature, then by making her the Engineere and Principle of *Motion*; and therefore as other Objects, are only diſcernable by the ſenſe, as colours, and ſounds by hearing, *Motion* is diſcernable by both, nay and by feeling too, which is a third ſenſe really diſtinguiſhed from them both. That there is in the Heavenly Bodies, no *motion* of Generation or Corruption, and of Augmentation, or Diminution, or Alteration, I have already ſhewed. There are alſo, by reaſon of the incredible ſwiftneſs of the firſt Mover, and ſome other ſuch Reaſons, dare deny, (as *Copernicus* doth) that there is in them any Lation, or Local *motion*, herein flatly oppoſing in my judgment both Scripture, Reaſon, and Senſe; But take it as granted, without any diſpute, that a Local *motion* there is; which is the meaſure of Time, as Time again is the meaſure of *Motion*; the Line of *Motion*, and the Thred of Time, being both ſpun out together: ſome

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doubt there is touching the Mover of these Heavenly Bodies, what or how it should be; some ascribing it to their Matter, some to their Form, and some to their Figure, and many to the Angels, or Intelligences, as they call them, which they suppose to be set over them. For mine own part, I should think that all these, and every one of them, might not unjustly challenge a part in that *Motion*: the Matter as being neither light nor heavy; the Form as well agreeing with such a Matter; the Figure as being Spherical or Circular; the Intelligence as an assistant: in the Matter is a disposition; for where light Bodies naturally move upward, and heavy downward, that which is neither light nor heavy, is rather disposed to a Circular *motion*, which is neither upward nor downward. In the Figure is an inclination to that *motion*, as in a Wheel to be carried round, from the Form an inchoation or onset: and Lastly, from the intelligence, a continuance or perpetuation thereof, as that great Divine *Hooker* in his *Ecclesiastical policy*, 5. 69. Expresseth, (saith he,) "*Gods own Eternity* "*is the bound which leadeth Angels in the course* "*of their perpetuity, the perpetuity the hand that* "*draweth out Celestial Motion; that as the Ele-* "*mentary substances are governed by the Heavenly,* "*so might the Heavenly by the Angelical. As* "*the Corruptible by the Incorruptible, so the Ma-*

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" *terial by the Immaterial, and all Finites by an In-*
" *finite.* It is the joynt conſent of the *Platonicks*, *Peripateticks*, *Stoicks*, and all noted Sects of *Philoſophers*, who acknowledg the *Divine Power*, with whom agree the greateſt part of our Chriſtian Doctors, That the Heavens are moved by Angels, neither is there in truth any ſufficient means beſide it, to diſcover the being of ſuch Creatures by the diſcourſe of Reaſon.

The moſt ſignal Motions of the Heavens (beſide their Retrogations, Trepidations, Libbrations, and I know not what hard Words, which the Aſtronomers have deviſed to reconcile the diverſity of their obſervations;) are the Diurnal Motion of the fixed Starrs and Planets, and all the Cœleſtial Spheres, from *Eaſt* to the *Weſt*, in the compaſs of every four and twenty hours, and the proper Motion of them all, from the *Weſt* to the *Eaſt*. Theſe Motions, whether they perform themſelves, without the help of Orbes, as Fiſhes in the Water, or Birds in the Air; or faſtned to their Spheres, as a Gemme in a Ring, or a Nail or knot in a Cart Wheele, I cannot eaſily determine: howbeit I confeſs, we cannot well imagin how one and the ſame body ſhould be carryed with oppoſite Motions, but by the help of ſomewhat in which it is carryed. As the Marriner may be carryed by the Motion of his

his Ship, from the *East* to the *West*, and yet himself may walk from the *West* to the *East* in the same Ship: or a Flie may be carried from the *North* to the *South* upon a Cart-Wheel, and yet may go from the *South* to the *North* upon the same Wheele; but howsoever it be, it is evident, that their Motions are even and regular, without the least jarr or discord, variation or uncertainty, languishing or defect that may be; which were it not so, there could be no certain demonstrations made upon the Globe or Material Sphere: which notwithstanding, by the Testimony of *Claudian*, are most infallible, as appears by those his elegant Verses upon *Archimedes* admirable invention thereof.

Jupiter *in parvo cum cerneret æthera vitro,*
Risit, & ad superos talia dicta dedit:
Huccine mortalis progressa potentia curæ?
Jam mens in fragili luditur Orbe labor
Jura Poli, rerumq; fidem legesq; Deorum
Ecce Syracusus *transtulit arte Senex.*
Inclusus variis famulatur spiritus astris
Percurrit proprium mentitus signifer annum
Et simulata novo Cynthia *mense redit.*
Famq; suum volvens audax industria Mundum
Gaudet & Humana sydera mense regit.

When *Jove* within a little glass survaid the

The Heavens, he ſmil'd, and to the Gods
thus ſaid;
Can ſtrength of Mortal Witt proceed
thus far?
Loe in a fraile Orbe my works matched
are.
Hither the *Syracuſians* art Tranſlates
Heavens form, the courſe of things, and
human fates.
Th' included Spirit ſerving the Star deck-
ed ſignes,
The living Work in conſtant Motion
windes.
Th' adulterate *Zodiak* runs a Natural
year
And *Cynthias* forg'd horns monthly new
light bear,
Viewing her own world; now bold in-
duſtry
Triumphes and rules with human pow-
er the skie.

The *Gentiles* ſaith *Julian* (As *Cyril* in his third Book againſt him, reports it) *Violentes nihil eorum quæ circa cælum motus vel augere neque ullam ſuſtinere de ordinatum affectionem, ſed congruam illius motionem ac bene optatam ordinem; definitas quoque leges Lunæ, definites ortus & occaſus ſolis, ſtatutis ſemper temporibus, merito Deum & Dei ſolium ſuſpicabantur.* Seeing

Seeing no part of Heaven to be diminiſhed and decreaſed, to ſuffer no irregular affection, but the Motion thereof, to be as duly and as orderly performed as could be deſired, the waxing and waining of the *Moon*, the riſing and ſetting of the *Sun* to be ſetled and conſtant at fixed and certain times; they deſervedly admired it as God, or as the Throne of God. The order and Regulation of which Motions we ſhall eaſily perceive by taking a particular view of them. I will touch only thoſe of the Planets. The proper Motion of *Saturn* was by the Ancients obſerved, and is now likewiſe found by our Modern Aſtronomers, to be accompliſhed within the ſpace of thirty years, that of *Jupiter* in twelve, that of *Mars* in two, that of the *Sun* in Three hundred ſixty and five dayes and almoſt ſix hours: neither do we find that they have quickned or any way ſlackned theſe their courſes, but that in the ſame ſpace of time they always run the ſame races they have paſſed. Theſe then are the bounds and limits to which theſe glorious Bodies are perpetually tyed, in regard of their Motion; theſe be the unchangeable Laws, like thoſe of the *Medes* and *Perſians*, whereof the *Pſalmiſt* ſpeaks, *He hath given them a Law which ſhall not be broken*, *Pſal.* 148.6. Which *Seneca* in his Book *De divina providentia*, well expreſſes in other words, *Æterna legis impe-*

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rio procedunt, they move by the appointment of an eternal Law, that is, a Law both invariable and inviolable. That which *Tully* hath delivered of one of them, is undoubtedly true of all: *Saturni Stella in ſuo curſu multa miracula efficiens, tum ante edendo, tum retardando, tum veſpertinis temporibus deliteſcendo, tum matutinis rurſum ſe aperiendo, nihil tamen immutat ſempiternis ſæculorum ætatibus, quam eadem eiiſdem temporibus efficiat, Lib. 2. de nat. Deor.* The Planet *Saturn* doth make ſtrange and wonderful paſſages in his Motion, going before, and ſometimes coming after, withdrawing himſelf in the Evening, and ſometimes again ſhewing himſelf in the Morning, and changeth himſelf nothing in the continual duration of ages; but ſtill at the ſame ſeaſon worketh the ſame effects. And in truth, were it not ſo, both in the Planet and in all other Starrs, it is altogether impoſſible that they ſhould ſupply that uſe which Almighty God in their Creation ordained them unto, that is, *To ſerve for Signs and Seaſons, for dayes and for years to the Worlds end, Gen.* 1. 14. And much more impoſſible it were, that the year, the month, the day, the hour, the minute of the oppoſitions, the Conjunctions and Eccliſes of the Planets, ſhould be as exactly calculated and foretold One hundred years before they fell out, as at what hour the *Sun* will riſe to morrow morning. To which

which perpetual æquability and conſtant uniformity in the Cœleſtial Motions, the *Divine Plato* accords, *Nec errant, nec præter antiquum ordinem revolvuntur*, Neither do they run at randum, nor are they rolled beyond their ancient order. *Ariſtotle* in his Book *De Mundo*, breaketh out in this paſſionate admiration thereof, *Quod nunquam poterit æquari cæleſti ordini, & volubilitati, cùm ſydera convertantur exactiſſima norma de alio in aliud ſeculum.* What can ever be compared to the order of the Heavens, and to the Motion of the Starrs in their ſeveral Revolutions, which move moſt exactly by a rule or ſquare, by line and level from one Generation to another.

There were among the Ancients not a few, nor they unlearned, who by a ſtrong fancie conceived to themſelves an excelleht melody made up by the motion of the Cœleſtial Spheers; it was broached by *Pythagoras*, entertained by *Plato*, and ſtifly maintain'd by *Macrobius*, and ſome other Chriſtians, as *Bede*, *Boetius*, *and Anſelm* Biſhop of *Canterbury*: But *Ariſtotle* puts it off with a jeſt in his *Lib.* 2. *de Cælo Cap.* 9. as being *Lepide & Muſice dictum, factis autem impoſſibile*, a pleaſant and Muſical conceit, but in Effect impoſſible; in as much as thoſe bodies in their Motion make no noiſe at all. Howſoever it may well be that this conceit of theirs was grounded upon a certain truth,

truth, which is the Harmonical and Proportionable Motion of thoſe Bodies in their juſt order, and ſet courſes, as if they were ever daneing the rounds and the Meaſures. In which regard the *Pſalmiſt* tells us, *That the Sun knoweth his going down, he appointeth the Moon for ſeaſons, Pſal.* 104. 19. Which words of his may not be taken in a proper, but in a figurative ſence; the Prophet therefore implying, that the Sun obſerveth his preſcribed Motion ſo preciſely to a point, that in the leaſt jot he never erreth from it: And therefore he is ſaid to do the ſame upon knowledg and underſtanding, *Non quod animatus ſit aut ratione utatur*, ſaith *Baſil* upon the place, *Sed quod juxta terminum divinitus, preſcriptum ingrediens, ſemper eundem curſus ſervat, ac menſuras ſuas cuſtodit.* Not that the Sun hath any Soul, or uſe of underſtanding; but becauſe he keepeth his courſes and meaſures exactly according to Gods preſcription. But the Motion of the Heavens puts me in mind of paſſing from it to the Light thereof. As the Waters were firſt ſpread over the face of the Earth: So was the Light diſperſed through the Firmament: and as the Waters were gathered into one heape, ſo was the Light knit up, and united into one body: as the gathering of the Waters was called the Sea, ſo that of the Light was called the Sun. As the Rivers come from the Sea, ſo is all the

Light of the Stars derived from the Sun; and laſtly, as the Sea is no whit leſſened, though it furniſh the Earth with abundance of freſh Rivers: So though the Sun have ſince the Creation, both furniſhed, and garniſhed the World with Light, neither is the ſtore of it thereby deminiſhed, nor the beauty of it any way ſtained. What the Light is, whether of a corporeal or incorporeal Nature, it is not eaſie to determine. Philoſophers diſpute it, but cannot well reſolve it. Such is our ignorance, that even that by which we ſee all things, we cannot diſcern what it ſelf is. But whatſoever it be, we are ſure that of all viſible Creatures, it was the firſt that was made, and comes neareſt the name of a Spirit, in as much as it moveth in an inſtant from the *Eaſt* to the *Weſt*, and piercing through all tranſparent Bodies, and ſtill remains in it ſelf unmixed and undivided; it chaſeth away ſad and melancholy thoughts, which the Darkneſs both begets and maintains; it lifts up our minds in meditation to him *that is the true Light, that Lightneth every man that cometh into the World, himſelf dwelling in Light inacceſſible, and cloathing himſelf with Light as with a Garment.* And if we may behold in any one Creature any ſpark of that Eternal Fire, or any farr-off dawning of Gods brightneſs, the ſame in the beauty and vertue of this Light may be beſt

best discerned. *Quid pulcherrimus Luce*, saith *Hugo de sancto Victore*, *quæ cum in se colorem non habeat, omnium tamen rerum colores ipsa quodammodo colorat.* What is more beautiful then Light, which having no colour in it self, yet sets a lustre upon all Colours? And St. *Ambrose*, *Unde Vox Dei in Scriptura debuit inchoare nisi a Lumine? unde Mundi ornatus nisi a Luce exordium sumere? frustra enim esset si non videretur.* From whence should the voice of God in holy Scripture begin, but likewise from the same Light; for in vain it were, were it not seen, as *Bartas* excellently Expresseth.

O Father of the Light, of wisedom Fountain,
Out of the Bulk of that confused Mountain,
What should, what could issue before the Light,
Without which, Beauty were no beauty, hight.

St. *Augustine* in divers places of his works is of opinion, That by the first Created Light, we understood the Angels, and herein is he followed by *Beda Eucherius*, and *Rupertus*, and divers others; which opinion of his, though it be questionless unsound, in as much as we are taught, *That the Light sprung out of Dark-*

nes, 2 *Cor*. 4. 6. Which of the Angels can in no sort be verified, yet it shews the lightsome nature of Angels; so likewise the Angelical nature of Light still flourishing in youth, and is no more subject to decay then the Angels are. They who maintain, that the Soul of Man is derived *ex traduce*, hold withall that the Father in begetting the sons Soul looses none of his own, it being *tanquam Lumen de Lumine*, as one Light from another: nay, more then so, it is the very resemblance that the *Nicene Fathers* thought not unmeet to express the unexpressible Generation of the second Person in the *Trinity* from the First; who is therefore termed by the Apostle *The brightness of his Glory*, *Heb*. 1. 3. As then the Father of the Communicating of his Substance to his Son, looses none of his own; so the Sun by Communicating of his Light to the world, looses no part nor degree thereof. Some things there are of that nature, as they may be both given and kept, as Knowledg and Vertue, and Happiness, and Light, which in Holy Scripture is Figuratively taken for them all. Whether the same Individual Light, be still resident in the body of the Sun, which was planted in it at the first Creation; or whether it continue empty and spend it self, and so like a River be repared with fresh supplies, for my part, I cannot certainly affirm, though I must

I must confess, I do rather incline to the former: But this I believe, as the body of the Sun is no whit lessened in extention, so neither is the Light thereof in intention: Men being now no more able to fix their eyes upon it, when it shines forth in its full strength, then they were at the first Creation of it. Now we have spoken of the Light, we shall next discourse of the warmth and influence thereof, which springs from it, which now succede in their order.

The Light of Heaven, of which we have spoken, is not more comfortable and useful, then is the warmth thereof; with a Masculine vertue it quickens all kind of Seeds, it makes them Vegitate, blossom and fructifie, and brings their Fruit to Perfection, for the use of Man and Beast, and the perpetuating of their own kindness; nay, it wonderfully refresheth and chears up the Spirits of Men, Beasts, Birds, and creeping things; and not only imparts the life of Vegitation, but of Sense and Motion, to many thousand Creatures, and like a tender Parent fosters and cherisheth it being imparted. Some there are that live without the light of Heaven, searching into and working upon those Bodies which the Light cannot pierce, but none without the warmth, it being in nature the universal instrument thereof, which made the *Psalmist* say, *That there is no-*

thing

thing hid from the heat of the Sun. Few things are hid from the Light, but from the Heat thereof nothing.

I am not ignorant that St. *Auguſtine*, St. *Baſil*, St. *Ambroſe*, and many Divines, held that there were Waters, properly ſo termed, above the Starry Firmament; who held withal, that the Sun and Starrs cauſe heat as being of a fiery Nature; thoſe waters being ſet there, in their Opinion, for the cooling of that heat, which Opinion of theirs ſeems to be favoured by *Syracides* in the forty third of *Eccleſiaſticus*, where he thus ſpeaks of the Sun, *At noon it parcheth the Country, and who can abide the burning heat thereof. A man blowing a Furnace is in works of heat: but the Sun burneth the Mountains three times more, breathing out fiery vapours.* Neither were there wanting ſome among the Ancient Philoſophers, who maintained the ſame Opinion, as *Plato* and *Pliny*, and generally the whole Sect of *Stoicks*, who held that the Sun and the Starrs were fed with watery vapours, which they drew up for their nouriſhment, and that when the vapours ſhould ceaſe and fail, the whole world ſhould be in danger of combuſtion; and many things are alledged by *Balbo* in *Cicero*'s Second Book of the Nature of the Gods, in favour of this Opinion of the *Stoick*. But that the Sun and Starrs are not in truth fiery and hot, appears by the ground already

already laid touching the matter of the Heavens, that it is of a nature incorruptible, which cannot be if it were fiery, in as much as thereby it would become lyable to alteration and corruption by an oppoſite and profeſſed enemy: beſides, all fiery bodies by a natural inclination mount upwards, ſo that if the Starrs were the cauſe of heat, as being hot in themſelves, it would conſequently follow, that their circular Motion ſhould not be natural but violent: Whereunto I may adde, the noted Starrs being ſo many in number, namely, One thouſand twenty and two, beſides the Planets, and in Magnitude ſo great, that every one of thoſe, which appear fixed in the Firmament, are ſaid to be much bigger then the whole Globe of the Water and Earth; and the Sun again ſo much to exceed both that Globe, and the biggeſt of them, as it may juſtly be ſtiled by the Son of *Syrac*, *Inſtrumentum admirabile*, A wonderful inſtrument, *Eccleſiaſt.* 43. 1. Which being ſo, were they of fire, they would doubtleſs long ere this have turned the World into aſhes, there being ſo infinite a diſproportion betwixt their flame, and the little quantity of matter ſuppoſed to be prepared for their Fewel. That therefore they ſhould be fed with vapours, *Ariſtotle* deſervedly laughs at it, as a childiſh and ridiculous device, in as much as the vapours

pours aſcend no higher then the middle Region of the Air, and then diſtill again upon the Water and the Earth from whence they were drawn up; and thoſe vapours being uncertain, the flames likewiſe feeding upon them muſt needs be uncertain, and daily vary from themſelves both in quantity and figure, according to the proportion of their Fewel.

The abſurdity then of this Opinion being ſo foule and groſs, it remains that the Sun and Starrs infuſe a warmth into theſe Subcœleſtial Bodies, as not being hot in themſelves, but only, as being ordained by God to bread heat in matter capable thereof, as they impart life to ſome Creatures, and yet themſelves remain void of life, like the brain which imparts ſenſe to every Member of the Body, and yet is it ſelf utterly void of ſenſe. But here again, ſome there are which attribute this effect to the Motion, others to the Light of theſe glorious Bodies: And true indeed it is, that Motion cauſes Heat, by the attenuation and rarefaction of the Air; But by this reaſon ſhould the Moon, which is nearer the Earth, warm more than the Sun which is many thouſand miles farther diſtant? and the higher Regions of the Air, ſhould be always hotter than the lower, which notwithſtanding if we compare the ſecond with the loweſt, is undoubtedly falſe. Moreover the Motion

of

of the Cœleſtial Bodies being uniform, ſo ſhould the heat in reaſon derived from them likewiſe be; and the Motion ceaſing, the Heat ſhould likewiſe; and yet I ſhall never believe, that when the Sun ſtood ſtill at the Prayer of *Joſhua*, it then ceaſed to warm theſe Inferiour Bodies. And we find by experience, that the Sun works more powerfully upon a Body which ſtands ſtill then when it moves, and the reaſon ſeems to be the ſame in the reſt or Motion of a Body warming or warmed, that receiveth or imparteth heat.

The Motion being thus excluded from being the cauſe of this Effect, the Light muſt of neceſſity ſtep in, and challenge it to its ſelf; the Light then it is which is the cauſe undoubtedly of Cœleſtial heat, in part by a direct beam, but more vehemently by a reflexed: for which very reaſon it is that the middle Region of the Air is always colder then the loweſt, and the loweſt hotter in the Summer then in the Winter, and at Noon then in the Morning and Evening, the beams being then more Perpendicular, and conſequently in their reflection more narrowly united, by which reflexion and union, they grow ſometimes to that fervency of heat, that fire ſprings out from them as we ſee in Burning-glaſſes; And by this artificial device it was that *Archimedes*, as *Galen* reports it in his third Book *De temperamentis*

peramentis, Cap. 1. Set on fire the *Emperours* Ships: and *Proclus* a famous *Mathematician*, practiſed the like at *Conſtantinople*, as witneſſeth *Zonarus* in the life of *Anaſtatius* the *Emperour*. And very reaſonable methinks it is, That Light, the moſt Divine Affection of the Cœleſtial Bodies, ſhould be the cauſe of warmth; the moſt noble active and excellent quality of the Subcœleſtial. Theſe two like *Hippocrates* Twins, *Simul oriuntur & moriuntur*, they are born and dye together, they increaſe and decreaſe both together; the greater the Light is, the greater the Heat; and therefore the Sun as much exceeds the other Starrs in Heat, as it doth in Light.

The Suns continual Declination, or nearer approach to the Earth, is rather an idle Dream than a ſound poſition, grounded rather upon the difference amongſt *Aſtronomers*, ariſing from the difficulty of their obſervations, then upon any certain or infallible concluſion. *Ptolomy*, who lived about the year of *Chriſt* one hundred and forty, makes the diſtance of the Sun to be from the Earth, One thouſand two hundred and ten Semidiameters of the Earth. *Albategnius*, about the year Eight hundred and eighty, makes it One thouſand one hundred and forty ſix. *Copernicus*, about the year One thouſand five hundred and twenty, makes it One thouſand five hundred and ſeventy nine.

Tycobrahe,

Tycobrahe, about the year One thouſand ſix hundred makes it One thouſand one hundred eighty two. Now I would demand whether the Sun were more remote in *Ptolomies* time, and nearer in the time of *Albategnius*, and then again, more remote in the latter ages of *Copernicus* and *Tychobrahe*? which if it were ſo, then one of theſe two muſt needs follow, that either theſe obſervations were not grounded upon ſo certain Principles as they pretend, or that the declination of the Sun is uncertain or variable, not conſtant and perpetual, as is pretended. But what would *Bodwin* ſay, if he lived, to hear *Lansbergius* and *Kepler*, and other famous *Aſtronomers* of the latter times, teaching that the Sun is now remote above Two thouſand and eight hundred, nay three thouſand Semidiameters from the Earth; affirming, that *Copernicus* and *Tycobrahe* neglected to allow for refractions, which (as the *Opticks* will demonſtrate) do much alter the caſe.

I will cloſe up this point with the cenſure of *Scaliger* in his *Exercit.* 99. upon the Patrons of this fancy, *Qua vero nonnulli prodere auſi ſunt, ſolis corpus longè proprius nos eſſe, quam quantum ab Antiquis ſcriptum ſit, ita ut in ipſa deferentis corpulentia locum mutaſſe videatur, vel ipſa ſcripta ſpongiis, vel ipſi Authores ſcuticis ſunt caſtigandi.* In as much as ſome have dared to broach, that the

the body of the Sun is nearer the Earth then by the Ancients was observed to be, so that it might seem to have changed place in the very bulk of the Sphear; either the Authors of this Opinion deserve themselves to be chastened with stripes, or surely their Writings to be razed with Sponges.

So that (as I conceive) it may fitly and safely be inferred, first, that either there is no such removal at all of the Sun, (as is supposed) or if there be, as we who are situate more Northerly, feel perhaps the effects of the defects of the warmth thereof, in the unkindly ripening of our fruit, or the like; so, likewise by the rule of Proportion, must it needs follow, that they who lye in the same distance from the *South* Pole, as we from the *North*, should enjoy the benefit of the nearer approach thereof; and they who dwell in the hoteſt Climates interjacent, of the abating of the immoderate fervency of their heat: From hence I again infer, that supposing a mutability in the Suns greatest Declination, look what dammage we suffer by his further removal from us in the Summer, is at least in part recompenced by his nearer approach in Winter, and by his Periodical Revolutions fully restored. And so I pass from the Consideration of the warmth, to those hidden and secret qualities of the Heavens, which to

Astronomers

Aſtronomers and *Philoſophers* are known by the name of Influences.

Howbeit *Ariſtotle* thorow all thoſe Works of his which are come to our hands, to my remembrance, hath not once vouchſafed ſo much as to take notice of ſuch qualities, which we call Influences; and though amongſt the Ancients *Averroes* and *Avicenne*, and amongſt ſome of the latter times *Picus Mirandula*, and *Georgius Agricola*, ſeek to diſprove them: yet both Scripture, and Reaſon, and the weighty Authority of many good Schollars, as well Chriſtians as *Ethnicks*, have fully reſolved me that ſuch there are. They are by Philoſophers diſtinguiſhed into two Ranks; the Firſt is, that Influence which is derived from the *Empyreal*, Immoveable Heaven, the Pallas and Manſion Houſe of Glorifyed Saints and Angels, which is gathered from the diverſity of Effects, as well in regard of Plants, as of Beaſts, and other Commodities under the ſame Climate, within the ſame Tract and Latitude, equally diſtant from both the Poles, which we cannot well originally refer to the inbred nature of the ſoile, ſince the Author of Nature hath ſo ordained, that the temper of the Inferiour Bodies ſhould ordinarily depend upon the Superiour; nor yet the Aſpect of the moveable Spheres and Starrs, ſince every part of the ſame Climate, ſucceſſively, but equally enjoyes

the

the ſame Aſpect: It remains then, that theſe Effects be finally reduced to ſome Superiour immoveable cauſe; which can be none other then that *Empyreal Heaven*; neither can it produce theſe effects by means of the Light alone, which is uniformly diſperſed through the whole, but by ſome ſecret quality which is diverſified according to the divers parts thereof; and without this, we ſhould not only find wanting that connexion and unity of order, in the parts of the World, which make it ſo comly, but withal ſhould be forced to make one of the worthieſt peeces of it void of Action, the chief end of every Created thing. Neither can this Action miſ-beſeem the worthineſs of ſo glorious a piece, ſince both the Creatour is ſtill buſied in the works of Providence, and the Inhabitants in the works of Miniſtration.

The other kind is that which is derived from the Starrs, the Aſpect of ſeveral Conſtellations, the Oppoſition and Conjunction of the Planets, and the like. Theſe we have warranted by the mouth of God himſelf, in *Job* 38. 31. according to our laſt and moſt exact Tranſlation; *Canſt thou bind the ſweet Influences of the* Pleiades, *or looſe the bands of* Orion? *canſt thou bring forth* Mazoreth *in his ſeaſon? or canſt thou guide* Arcturus *with his Sons? knowſt thou the Ordinances of Heaven? canſt thou*

ſet

ſet the dominion thereof in the Earth? where by the Ordinances of Heaven, it may be thought is meant, the courſe and order of theſe hidden qualities, which without Divine and Supernatural Revelation, can never perfectly be known to any mortal Creature.

Beſides as *Sr. Walter Raleigh* hath well and truly obſerved, it cannot be doubted, but the Starrs are Inſtruments of far greater uſe, then to give an obſcure Light, and for men only to gaze at after Sun ſet: it being manifeſt that the diverſity of Seaſons, the *Winters* and *Summers*, more hot or cold, more dry or wet, are not ſo uncertained by the Sun and Moon alone, who alwayes keep one and the ſame Courſe, but that the Starrs have alſo their working therein, as alſo in producing of ſeveral kinds of Mettals and Minerals in the bowels of the Earth, where neither Light nor Heat can pierce. For as Heat pierces where Light cannot, ſo the Influence pierces where the Heat cannot.

Moreover, if we cannot deny, but that God hath given Vertues to Springs and Fountains, to the cold Earth, to Plants, to Stones, and Minerals, nay to the excremental parts of the baſeſt living Creatures; why ſhould we rob the beautiful Stars of their working Powers? for ſeeing they are many in number, and of eminent beauty and Magnitude, we

may

may not think, in the Treasury of his Wisdom who is Infinite, there can be wanting, even for every Star, a peculiar Vertue and Operation: As every Herb, Plant, Fruit, and Flower, adorning the face of the Earth, hath the like. As then these were not Created to beautifie the Earth alone, or to cover and shaddow her dusty face; but otherwise, for the use of Man and Beast, to feed them and cure them: So were not those incomparably glorious Bodies set in the Firmament, to none other end then to adorn it, but for Instruments and Organs of his Divine Providence and Power, so far as it hath pleased his just Will for to determine; which *Bartas* admirably expresseth,

I'le ne'r believe, that the *Arch-Architect*
With all these Fires the Heavenly Arches deckt
Only for shew, and with these glistering Shields
T' amaze poor Shepheards watching in the Fields.
I'le ne'r believe, that the least Power that pranks
Our Golden Borders, or the common Banks,

And

And the leſt Stone that in her warming lap,
Our kind nurſe Earth covetouſly doth wrap,
Hath ſome peculiar Vertue of its own,
And that the Glorious Starrs of Heaven have none,
But ſhine in vaine, and have no charge preciſe,
But to be walking in Heavens Galleries,
And through that Pallace up and down to Clamber,
As golden Guls about a Princes Chamber.

But how far it hath pleaſed God in his Divine Wiſdom to determine of theſe Influences, it is hard, I confeſs, to be determined by any human Knowledg.

For if in the peculiar vertues of Herbs and Plants, which our ſelves ſow and ſet, and which grow under our feet, and we daily apply to our ſeveral uſes, we are notwithſtanding in effect ignorant, much more in the Powers and workings of the Cœleſtial Bodies. For (as to this purpoſe we ſaid before) *Hardly do we gueſs at the things that are on the Earth, and with labour do we find the things that*

are before us: but the things which are in Heaven who hath searched out? Wisd. 9. 16. It cannot well be denyed, but that they are not Signes only, but at least wise concurrent Causes of immoderate cold or heat, drought, or moisture, lightning, thunder, raging winds, Inundations, Earthquakes, and consequently of Famine and Pestilence; yet such cross accidents may and often do fall out, in the matter upon which they work, that the Prognostication of these casual Events, by the most skillful *Astronomers*, is very uncertain: And for the common Alminacks, a man by observation shall easily find, that the contrary to their Predictions is commonly truest.

Now for the things which rest in the liberty of Mans Will, the Starrs have doubtless no power over them, except it be led by the sensitive appetite, and that again stirred up by the constitution and complexion of the body, as too often it is, specially when the humours of the Body are strong to assault, and the Vertues of the Mind weak to resist. If they have dominion over Beasts, what shall we judge of Men, who differ little from Beasts? I cannot tell, but sure I am, that though the Starrs incline a Man to this or that course of life, they do but incline, inforce they cannot: Education and Reason, and most of all Religion, may alter and over-master that Inclination,

nation, as they may produce a clean contrary Effect. It was to this purpose, a good and Memorable speech of Cardinal *Poole*, who being certified by one of his acquaintance, who professed the knowledg of these secret favours of the Starrs, that he should be raised and advanced to a great Calling in the World; made answer, that whatsoever was portended by the figure of his birth, for natural Generation, was cancelled and altered by the grace of his second Birth, or Regeneration in the Blood of his Redeemer.

Again, we may not forget that Almighty God created the Starrs, as he did the rest of the Universal, whose secret Influences may be called his reserved and unwritten Laws, which by his Prerogative Royal he may put in execution, or dispence with at his pleasure. For were the strength of the Starrs such as God hath quitted unto them, all Dominion over his Creatures, that Petition in the Lords Prayer, *Lead us not into Temptation, but deliver us from Evil*, had been none other but a vain expence of words and time. Nay, be he *Pagan* or *Christian* that so believeth, the only true God of the one, and the imaginary God of the other, would thereby be despoyled of all worship, reverence, and respect.

As therefore I do not consent with them who would make those glorious Creatures of

God vertuleſs; ſo I think that we derogate from his Eternal and Abſolute Power, to aſcribe to them the Dominion over our Immortal Souls, which they have over our Bodily Subſtances, and periſhable Natures. For the Souls of Men loving and fearing God, receive Influence from that Divine Light it ſelf, whereof the Suns Clarity and that of the Starrs is by *Plato* called but a ſhadow, *Lumen eſt Umbra Dei, & Deus eſt Lumen Luminis*, Light is the ſhadow of Gods brightneſs, who is the Light of Lights.

There have been great talks touching the Conjunction of *Saturn* and *Jupiter*, and many ominous conjectures are caſt abroad upon it, which if perhaps they prove true, I ſhould rather aſcribe it to our ſins, then to the Stars; they were not created to govern, but to ſerve Man, if he ſerve and be governed by his Creatour: ſo that we need not to ſearch the Cauſe ſo far off in the book of Heaven, we may find it written neater home in our own Boſomes: And for the Stars, I may ſay, as our Saviour Chriſt doth the Sabboth, the Stars were made for Men, and not Men for the Stars; and if God be on our ſide, and we on his, *Jupiter*, and *Saturn* ſhall never hurt us. But whatſoever the force of the States be, upon the perſons of private Men, or the Stars of Wealpublicks, I ſhould rather adviſe a modeſt ignorance

norance therein, then a curious inquiſition hereinto, following the witty and pithy counſel of *Phavorinus* the Philoſopher in *Gellius*, *Lib.* 4. *Sect.* 1. where he thus ſpeaks, *Aut adverſa eventura dicunt, aut proſpera: ſi dicunt proſpera, & fallunt, miſer fies fruſtra expectando; & ſi adverſa dicunt & mentiuntur, miſer fies fruſtra timendo: ſi vera reſpondent, eaque ſunt non proſpera, jam inde ex animo miſer fies antequam è fato fias; ſi fælicia promittiunt eaque eventura ſunt, tum planè duò eorum incommoda, & expectatio te ſuſpenſum fatigabit, & futurum gaudii fructum ſpes tibi deflorаverit.* Either they portend or bad or good luck, if good, and they deceive, thou wilt become miſerable by a vain expectation; if bad, and they lye, thou wilt be miſerable by a vain fear; if they tell thee true, but unfortunate Events, thou wilt be miſerable in mind before thou art by deſtiny; if they promiſe fortunate ſucceſs, which ſhall indeed come to paſs, theſe two inconveniences will follow thereupon, both expectation by hope will hold thee in ſuſpence, and hope will deflure and devoure the fruit of thy content. His concluſion is, which is alſo mine for this point and this diſcourſe touching the Heavenly Bodies: *Nullo igitur pacto utendum eſt iſtiuſmodi hominibus res futuras præſagientibus*: We ought in no caſe to have recourſe to theſe kind of Men, which undertake the foretelling of care-

ful Events. And so I pass from the consideration of the Cœlestial Bodies, to the Subcœlestial, which by Gods ordinance depend upon them, and are made subordinate to them; touching which and the Cœlestial Bodies both together, comparing each with the other, the Divine *Bartas* thus sweetly and truly sings;

Things that consist of th' Elements uniting,
Are ever tost with an intestine fighting,
Whence spring in time their Life and their deceasing,
Their diverse change, their waxing and decreasing.
So that, of all that is, or may be seen
With Mortal Eyes, under Nights horned Queen,
Nothing retaineth the same form and face,
Hardly the half of half an hours space.
But the Heavens feel not Fates impartiall rigour,
Years adde not to their Stature nor their Vigour:
Use weares them not, but their green ever age,
Is all in all still like their pupillage.

Sublunary

Sublunary Bodies are ſuch as God and Nature hath planted under the *Moon*. Now the ſtate of theſe Inferiour being governed by the Superiour: as in the Wheels of a Clock or Watch, if the firſt be out of order, ſo are the ſecond and third, and the reſt that are moved by it; for it is more then probable that the firſt partake with them in the ſame condition; which dependance is very well expreſſed by *Boethius*, where having ſpoken of the conſtant regularity of the Heavenly Bodies, *de Conſol. Lib.* 4. *Met.* 6. He thus goes on.

Hæc concordia temperat aquis, &c.
Thus Engliſhed,

The Concord tempers equally
Contrary Elements,
That moiſt things yield unto the dry,
And heat with cold conſerts;
Here Fire to higheſt place doth flie,
And Earth doth downward bend,
And Flowery Spring perpetually
Sweet odours forth doth ſend.
Hot Summer Harveſt gives, and ſtore
Of Fruit *Autumnus* yields,
And ſhoures which down from Heaven
do poure,
Each Winter drown'd the Fields:

What ever in the World doth breath,
This temper forth hath brought,
And nourished: the same by Death
Again it brings to nought.

Among the Subcœlestial things following Natures Method, I will first begin with the consideration of the Elements, the most simple and Universal of them all, as being the Ingredients of all mixed Bodies, either in the whole or in part, and into which the mixed are finally resolved again, and are again by turnes remade of them, the common matter of them all still abiding the same: of which *aBarts*,

Here's nothing constant, nothing still doth
stay;
For Birth and Death have still successive
sway:
Here one thing springs not till another
dye,
Only the Maker lives Immortally.
The Almighty stable, Body of this all,
(Of changeful chances common Arce-
nal,
All like it self, all in it self, contain'd
Which by times flight hath neither lost
nor gain'd)
Changeless in Essence, changeable in
face,

Much

Much more then *Proteus* or the ſubtil race
Of roving *Polypes*, who (to rob the more)
Transform them hourly on the waving Shore;
Much like the *French*, (or like our ſelves their Apes)
Who with ſtrange habits do diſguiſe their ſhapes.
Who loving novels full of affectation,
Receive the manners of each other Nation.

By conſent of Antiquity the Elements are in Number four, The Fire, the Air, the Water, and the Earth, of which the ſame Poet thus expreſſes himſelf:

Four Bodies Primitive the World ſtill contains;
Of which, two downwards bend, the Earth and Watery planes.
As many weight do want, and nothing forcing, higher
They mount, th' Air, and purer ſtreams of Fire,
Which though they diſtant be, yet all things from them take
Their Birth, and into them their laſt returns do make.

Three

Three of them ſhew themſelves manifeſtly in Milk, the Butter being the Aerial part thereof, the Why the Watery, and the Cheeſe the Earthy: but all four in the burning of green Wood, The Flame being Fire, the ſmoak the Air, the Liquid deſtilling at the ends the Water, and the Aſhes the Earth. Philoſophy likewiſe by reaſon teaches and proves the ſame, from their Motion upwards and downwards, from their ſecond qualities of lightneſs and heavineſs, and from their firſt qualities, either Active as heat and cold, or Paſſive as dry and moiſt. For as their Motion proceeds from the ſecond qualities, ſo do their ſecond from their firſt from the Heavenly Bodies, next to which, as being the Nobleſt of them all, as well in purity as activity, is ſeated the Element of the Fire (though many of the Ancients, and ſome later Writers, as namely *Cardane*, (amongſt the reſt) ſeemed to make a doubt of it, *Lib.* 1. *Subtil.* And *Manilius* in his firſt Book of *Aſtronomy*.

Ignis ad æthereas voluter ſe ſuſtulit auras
Summaque complexus Stellantis culmina Cœli,
Flammarum vallo Naturæ Mania fecit.

The

The Fire eſt ſoones up towards Heaven did flye,
And compaſſing the Starry World, advanced
A wall of Flames to ſafeguard Nature by.

Next the Fire, is ſeated the Air, divided into Three Regions, next the Air the Water, and next the Water the Earth; ſo *Bartas*,

Who ſo (ſometime) hath ſeen rich ingots tride,
Where forc't by Fire their Treaſure they divide:
(How fair and ſoftly Gold to Gold doth paſs,
Silver ſeeks Silver, Braſs conſorts with Braſs,
And the whole lump, of parts unequal, ſevers
It ſelf apart, in white, red, yellow Rivers)
May underſtand how, when the mouth Divine
Open'd to each his proper place t' aſſign)
Fire flew to Fire, Water to Water ſlid,
Air clung to Air, and Earth with Earth abid.

The

The Vail both of the *Tabernakle* and *Temple*, were made of Blew, and Purple, and Scarlet, or Crimſon, and fine twiſted Linnen: by which four as *Joſephus* noteth, were repreſented the four Elements; *Lib. Antiquit. 15. Cap. 14.* His words are theſe: *Velum hoc erat Babilonium variegatum, ex Hyacintho, & byſſo, coccoque & purpura, mirabiliter elaboratum, non indignam contemplatione materiæ commiſtionem habent, ſed velut omnium imaginem præferens, Cocco enim videbatur ignem imitari, & Byſſo terram, & Hyacintho aerem, ac Mare purpura, partim quidem coloribus, byſſo autem & purpura Origine, byſſo quidem quia de terra, Mare autem purpura gignit.* The Vaile was *Babiloniſh* Work, moſt artificially imbrodered with Blew, and fine Linnen, and Scarlet, and Purple, having in it a mixture of things not unworthy of our Conſideration, but carrying a kind of reſemblance of the Univerſe, for by the Scarlet, ſeemed the Fire to be repreſented; by the Linnen the Earth, by the Blew the Air, and by the Purple the Sea; partly by reaſon the Colours of Scarlet and Blew, partly by reaſon of the Original of Linnen and Purple, the one coming from the Earth, the other from the Sea. And *St. Hierom* in his Epiſtle to *Fabiola, Epiſt.* 128. hath the very ſame conceit, borrowed, as it ſeems, from *Joſephus*, or from *Philo*, who hath much to the like purpoſe, in his Third Book

of

of the life of *Moſes*: or it may be from *Wiſd.* 18. 14. *In the long Robe was the whole World*: As not only the Vulgar Latin, and *Arias Montanus*, but out of them and the *Greek* Original, our laſt *Engliſh* Tranſlation reads it.

The Fire is dry and hot, the Air hot and moiſt, the Water moiſt and cold, the Earth cold and dry: thus are they linked, and thus do they embrace one another with their Simbolizing qualities, the Earth being linked to the Water by coldneſs, the Water to the Air by moiſtneſs, the Air to the Fire by warmth, the Fire to the Earth by drought: which are all the combinations of the qualities that can poſſibly be; hot and cold, as alſo dry and moiſt, in the higheſt Degrees, being altogether incompatible in the ſame ſubject: and though the Earth and the Fire are moſt oppoſite in diſtance, to ſubſtance, and in activity, yet they agree in one quality, the two middle being therein directly contrary to the two extreams, Air to Earth, and Water to Fire.

Theſe four then, as they were from the beginning, ſo ſtill they remain the Radical and Fundamental Principles of all Subcœleſtial Bodies; diſtinguiſhed by their ſeveral and Ancient Situations, Properties, Actions, and Effects; and howſoever after their old wont they fight and combate together, being ſingle, yet in compoſition they ſtill accord mar-

marvellous well, as *Boethius Lib.* 3. *Met.* 9.

Tu numeris Elementa ligas, ut frigora flammis,
Arida conveniunt Liquidis, ne puriùs ignis
Evolet, aut mersas deducant pondera terras.

To Numbers thou the Elements dost tie
That cold with heat may symbolize, and dry
With moist, lest purer Fire should soare to high,
And Earth through too much weight too low should lie.

The Creator of them hath bound them, as it were, to their behaviour, and made them in every mixed body to stoop and obey one Prædominant, whose sway and conduct they willingly follow. The Air being Prædominant in some, as in Oyl, which alwayes swimmes on the top of all other Liquors; and the Earth in others, which always gather as near the Center as possibly they can. And as in these, they vary not a jot from their nature and wonted properties; so neither do they in their other conditions. It is still true of them, that *Nec gravitant nec levitant in suis locis*, there is no sense of their weight or lightness

neſs in their proper places, as appears by this, that a Man lying in the bottom of the deepeſt Ocean, he feels no burthen from the weight thereof; the Fire ſhall ſerve to warm us, the Air to maintain our breathing, the Water to cleanſe and refreſh us, the Earth to feed and ſupport us, and which of them is moſt neceſſary for our uſe is hard to determine: Likewiſe they ſtill hold the ſame proportion one towards another, as they have done: For howbeit the *Peripeteticks*, pretending herein the Authority of their *Mr. Ariſtotle*, tell us, that as they riſe above one another in Situation, ſo they exceed one another *proportione decupla*, by a ten-fold proportion; yet is this doubtleſs a foul Errour, or at leaſt-wiſe a groſs miſtake, whether we regard their entire bodies, or their parts? if their entire bodies, it is certain, that the Earth exceeds both the Water and the Air by many degrees: the depth of the Waters not exceeding two or three miles, and for the moſt part not above halfe a mile, as Marriners find by their Line and Plummet, whereas the Diameter of the Earth, as *Mathematicians* demonſtrate, exceeds Seven thouſand miles. And for the Air, taking the height of it from the part of the ordinary Comets, it contains by eſtimation about fifty two miles, as *Nonius*, *Vitellio*, and *Alhazen* ſhew by *Geometrical* proofs.

Whence

Whence it plainly appears, that there cannot be that proportion betwixt the entire Bodies of the Elements which is pretended, nor at any time was since the Creation. And for their parts, 'tis as clear by experience, that out of a few drops of Water, may be made so much Air as shall exceed them a thousand times at least.

There is in the Elements a noble compensation of their fourfold qualities, dispencing themselves by even turnes and just measures. For as the Circle of the Year is distinguished by four quarters, one succeeding another, the time running about by equal distances: In like manner the Four Elements of the VVorld by a reciprocal vicissitude exceed one another: and which a man would think to be incredible, while they seem to dye, as *Philo* writes, they become Immortal, running the same race, and instantly traveling up and down by the same path. From the Earth the way riseth upward,, it dissolving into VVater, the VVater vapours forth into the Air; the Air is rarified into Fire, and again they descend downward the same way, the Fire by quenching being turned into Air, the Air thickned into VVater, and the Water into Earth. Hitherto *Philo*, wherein after his usual manner he *Platonizes*, the same being in effect to be found in *Plato's Timæus*, as also in *Aristotles*

tles Book *De Mundo*, if it be his, in *Damaſcen*, and *Gregory Nyſſen*. And moſt elegantly in the wittieſt of Poets, *Ovid Met.* 15.

——Reſolutaque tellus
In liquidas rareſcit aquas tenuatur in auras,
Aeraque humor habet dempto quicque pondere rurſus
In ſuperos aer tenuiſſimus emicat ignes.
Inde retro redeunt: idemque retexitur ordo
Ignis enim denſum ſpiſſatus in Aera tranſit
Hinc in aquas tellus glomerata cogitur unda.

The Earth reſolved is turned into ſtreames,
Water to Air, the purer Air to Flames:
From whence they back return, the fiery flakes
Are turned to Air, the Air thickned takes
The Liquid form of Water, that Earth makes.

The Four Elements herein reſembling an Inſtrument of Muſick with four ſtrings, which may be tuned diverſe wayes, and yet the harmony ſtill remains ſweet: and ſo are they compared in the Book of Wiſdom, *Cap.* 19. *v.* 17. *The Elements agreed amongſt themſelves in*

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this change, as when one tune is changed upon an Instrument of Musick, and the Melody still remaineth.

Utque novis facilis signatur cera figuris
Nec manet ut fuerat, nec formam servat eandem,
Sed tamen ipsa eadem est.

They are the Verses of *Ovid* in the 15 *Met.* touching which several Prints stamped upon one and the same lump of Wax *Bartas* curiously dilates in one of his weeks.

Our next subject will be to discourse of *Comets* and *Blazing Starrs*, the uncertainty of the Predictions of them. Some took the *Comet* to have been a Star Ordained and Created from the first beginning of the World, but appearing only by times and by turnes: of this mind was *Seneca*; *Cardan* likewise in latter times harpes much, if not upon the same, yet the like string. But *Aristotle* (in his *Natur. Quest. Lib.* 7. *Cap.* 21. 23. (whose weighty reasons and deep judgment I much reverence) conceiveth the Matter of the *Comet*, to be a very hot and dry exhalation, which being lifted up, by the force and vertue of the Sun, into the highest Region of the Air is there inflamed, partly by the Elements of Fire, upon which it bordereth, and partly by the motions of the Heavens

vens which hurleth it about; ſo that there is in the ſame manner of an *Earth-quake*, the Wind, the Lightning, and a Comet; if it be impriſoned in the bowels of the Earth, it cauſeth an *Earthquake*, if it aſcend to the Middle Region of the Air, and be from thence beaten back; Wind if it enter that Region and be there environed with a thick Cloud; Lightning; if it paſs that Region a *Comet*, or ſome other fiery *Meteor*, in caſe the matter be not ſufficiently capable thereof.

The common Opinion hath been, that *Comets* either as Signes or Cauſes, or both, have always Prognoſticated ſome dreadful miſhaps to the World, as out-ragious Winds, extraordinary Drought, Dearth, Peſtilence, Warrs, the death of Princes and the like.

Nunquam fatilibus excanduit ignibus æther.

Nere did the Heavens with idle blazes Flame.

So *Manelius* hath it, But the Lord Privy Seal, Earl of *Northampton*, in his Defenſative againſt the Poyſon of ſuppoſed Propheſies, hath ſo ſtrongly incountered this Opinion, that for my own part I muſt profeſs, he hath perſwaded me, that there is no certainty of thoſe Predictions, in as much as *Comets* do not

always fore-run ſuch events, neither do theſe events always follow upon the appearing of *Comets*. Some inſtances he produceth of *Comets*, which brought with them ſuch abundance of all things, and abated their priſes to ſo low an Ebbe, as ſtories have recorded it for Monuments, and Miracles to poſterity: and the like, ſaith he, could I ſay of others, *Anno Dom.* 1555. 1556 1557. 1558. After all which years nothing chanced that ſhould drive a man to ſeek out any cauſe above the common reach: and therefore I do allow of the diligence of *Gemma-Friſius*, in taking notice of as many good, as bad effects, which have ſucceeded after *Comets*. Moreover he tells us, that *Peucer*, a great Mathematician of *Germany*, Prognoſticated upon the laſt *Comet*, before the writing of his Defenſative, that Mens bodies ſhould be parched and burned up with heat: But how fell it out? Forſooth, ſaith he, we had not a more unkindly *Summer* for many years, in reſpect of extraordinary cold: never leſs inclination to War; No Prince deceaſed in that time, and the Plague in *Lombardy*, as God would have it, ceaſed at the riſing of the *Comet*. Beſides all this he reports, of his own experience, as an Eye witneſs, that when divers perſons, upon greater ſcrupuloſity then cauſe, went about to diſſwade *Queen Elizabeth*, lying then at *Richmond*, from looking on the *Comet* which

which then appeared, with a courage answerable to the greatness of her State, she caused the Window to be set open, and cast out this Word, *Jacta est alea*, the Dice are thrown; thereby shewing, that her stedfast hope and confidence, was too firmly planted in the good pleasure and Providence of God, as not to be blasted or affrighted with those beams, which either had a ground in Nature whereupon to rise, or at least wise no warrant in Scripture to portend the misfortune of Princes. Neither have I heard of any *Comet* that appeared before her Death (as at her entrance there did) nor that of Prince *Henry*, nor of *Henry* the Great of *France*; the one being a most peerless Queen, the other a most incomparable Prince, and the third for Prudence and Valour, a matchless King: Therefore as *Seneca* truly notes, Natural is *magis nova quam magna mirari*, It is natural unto us to be inquisitived and curious rather about things new and strange, than those which are in their own nature truly great; yet even amongst the Ancients, *Charlemaine* professed, that he feared not the signe of the *Blazing-Star*, but the Great and Potent Creator thereof. And *Vespasian*, as *Dion* reports, when the apparition of a *Comet* was thought to portend his Death, replied merrily: No, said he, this bushy Star notes not me, but the *Parthian*

King: *Ipse enim Cometus est, ego vero calvus sum*; for he wares bushy Locks, but I am bald. Lastly, some *Comets* have been the Messengers of joyful and happy tidings, as at the Birth of our Saviour, and another at the Death of *Nero*, *Cometes summè bonis apparuit, qui prænuntius fuit Mortis Magni illius Tyranni, & pestilentissimi hominis*, saith *Tacitus*: There appeared a favourable and auspicious *Comet*, as an *Herauld* to Proclaim the Death of that Great Tyrant and most Pestilent Man. Though as to some judgments we are sensible (they by the Effects have been predictive) though the *Astronomers* have not found them out. Now that which hath been said of *Comets* may also be applied to other Fiery and Watery *Meteors*, as Streamings, Swords, flying Dragons, fighting Armies, Gapings, two or three Sunns and Moons, and the like appearing in the Air, many times to the great terrour and astonishment of the beholders: of all which and many more of that kind, he that desires to read more of, I refer him to *Vicomercatus*, *Garzæus*, *Pontanus*, & *Lycosthenes de prodigiis & portentis ab orbe condito, usque ad annum* 1557. And to other latter writers of Monstrous and Prodigious accidents. But the strangest Apparition in the Air that ever I heard or read of, was that which I find reported by *Mr. Fox.* in his *Acts* and *Monuments*,

ments, whilſt the *Spaniſh* Match with Queen *Mary* was in the heat of treating, and neer upon the concluding, There appeared in *London* on the fifteenth of *February* 1554, a *Rainbow* reverſed, the Bow turning downwards, and the two ends ſtanding upwards, a Prodigious and Supernatural Sign indeed of thoſe miſerable and bloudy times which quickly followed after.

As touching unſeaſonable Weather, for exceſſive Heat and cold, or immoderate Drought and Rain, Thunder and Lightning, Froſt and Snow, Hail and Winds, yea and Contagious Sickneſſes, and Peſtilential and Epidemical Diſeaſes, theſe ariſe from the infection of the Air, by noiſome Miſts and Vapours, to which we may adde Earthquakes, burning in the bowels of the Earth, and the like.

Earthquakes ariſe alſo from the diſtempers of the Air, but in another manner. They firſt gave occaſion to the compoſing of that Letany, *and therein to the Petition againſt ſuddain Death*, which by Publick Authority is uſed through the Chriſtian Churches at this day. By the force of *Earthquakes*, contrary to the Proverb, *Mountains have met: the City of* Antioch, *where the Diſciples were firſt call'd Chriſtians*, with a great part of *Aſia* bordering upon it, was in *Trajans* time ſwallowed with an *Earthquake*, as *Dion* writes, who reports very mer-

veilous things thereof. By the ſame means at one time were Twelve famous Cities of *Aſia* over-turned in the Reign of *Tiberius*. And at another time as many Towns of *Campania* under *Conſtantine*. And of late times we have not been without ſuch wonderful examples of the dreadfulneſs of this accident, above the Peſtilence or any other Miſeries incident to Mankind. *Seneca* excellently diſcourſes of them, in the Sixth Book of his Natural Queſtion, *Hoſtem mure expellam*, ſaith he, and ſo he goes on; to avoid prolixity I ſhall here give you only the *Engliſh*, A Wall will repel an Enemy, Rampires raiſed to a great height by the difficulty of their acceſs will keep out powerful Armies, An *Haven* ſhelters us from a Tempeſt, and the covering of our Houſes from the violence of Storms and laſting Rains; the Fire doth not follow us, if we Fly from it: againſt Thunder and the Threats of Heaven, vaults under ground, and deep Caves are Remedies; thoſe Blaſtings and Flaſhes from above, do not pierce the Earth, but are blunted by a little piece of it oppoſed againſt them; In the time of Peſtilence a Man may change Dwellings, there is no miſchief but may be ſhunned, the Lightning never ſtruck a whole Nation, a Peſtilential Air hath emptied Cities, not over-turned them: but this miſchief is large in ſpreading,

unavoidably greedy of Deſtruction, generally dangerous. For it doth not only depopulate Houſes and Families, and Towns, but layes waſte and makes deſolate whole Regions and Countries: ſometimes covering them with their own Ruines, and ſometimes overwhelming them, and burying them in deep Gulfs, leaving nothing whereby it may appear ſo much as to poſterity, that that which is not, ſometimes was, but the Earth is levelled over moſt famous Cities, without any mark of their former exiſtence; ſo far *Seneca*.

As theſe quakings of the Earth are very terrible, ſo are the burnings of the Bowels thereof no leſs dreadful; the one being as it were the cold, and the other the hot fits thereof. The Mountain *Ætna* in *Sicile* hath flamed in time paſt ſo abundantly, that by reaſon of the thick ſmoak and vapours ariſing therefrom, the Inhabitants thereabout ſometimes could not ſee one another (if we may give credit to *Sandies* relation *Lib.*4.) It raged ſo much that *Africa* was thereof an aſtoniſhed Witneſs. But *Virgils* admirable deſcription of it may ſerve for all.

——*Horificis tonat* Ætna *ruinis*
Interdumque atram perumpit ad æthera Nubem;
Turbine fumantem piceo, & candente favilla,
Attollitque

Attollitque globos Flammarum & Sydera Lambit,
Interdum ſcopulos, avulſaque viſcera Montis
Erigit eructans liquefactaque ſaxa ſub auras
Cum gemitu glomerat, fundoque exæſtuat imo.

Ætna here thunders with a horrid noiſe,
Sometimes black clouds evaporated to the skies,
Fuming with pitchy curles, and ſparkling Fires,
Toſſeth up, Globes of Flames to Starrs aſpires,
Now belching Rocks, the Mountains entrailes torne,
And groaning hurles out liquid Stones there born
Thorow the Air in ſhowres.

But

But rightly did *Ovid* in the 15 *Met.* Devine of this Mountain and the burnings therein,

Nec quæ ſulphuriis ardet fornacibus Ætna,
Ignea ſemper erit, neque enim fuit ignea ſemper.

Ætna which flames of Sulphur now doth raiſe,
Shall not ſtill burn, nor hath it burnt always.

The like may be ſaid of *Veſuvius* in the Kingdom of *Naples*, it flamed with the greateſt horrour in the firſt, or as ſome ſay in the third year of the Emperour *Titus*, where beſides Beaſts, Fiſhes, and Foul, it devoured two adjoyning Cities, *Herculanum* and *Pompeies*, with the People in the Theatre: *Pliny* the Natural Hiſtorian, then Admiral of the *Roman* Navy, deſirous to diſcover the reaſon, was ſuffocated, as his Nephew expreſſed in an Epiſtle of his to *Cornelius Tacitus*; the like, as to his too ſtrict enquiry of the increaſe and decreaſe of the Sea, being reported of *Ariſtotle*.

Having thus imployed my Reaſon as Divinly as I could, in preſenting my Reader with an explanation of a few Leaves of the great Volume of Nature: I ſhall now (with his favour) think it convenient before I proceed

to

to treat of the Powers of the Mind in the Arts, &c. To refute ſuch other Vulgar Errours in their ſeveral Claſſes (though leſs conſiderable) as hitherto I have not met withal.

1. It is a common received Opinion in Philoſophy that the principal faculties of the Soul, the Underſtanding, the Imagination and Memory are diſtinguiſhed by three ſeveral Cells or Ventricles in the Brain, the imagination (as is conceived) being confined to the fore-part, the Memory to the hinder part, and the Judgment and Underſtanding to the middle part thereof; which Opinion *Laurentius* confutes, in his *Hiſt. Anat. Lib.* 10. 9.2. and *Fernelius* derides, making them all to be diſperſed through all the receptacles of the brain, in as much as ſometimes when the whole Brain is diſaffected, the operation but of one of theſe Faculties is hurt, and ſometimes again, when but one Ventricle is hurt the operation of all the three Faculties is hindred. Neither ought it to ſeem more ſtrange, that the ſame Ventricle in the brain ſhould be capable of all theſe three Function, then that the ſame Bone or Sinew and every part or Particle thereof ſhould have in it (in regard of the nouriſhment it receives, and the excrement it drives forth) an attractive, a retentive, an aſſimilative, and an expulſive Vertue.

2. That in Nature there is an *Eaſt* and a *Weſt*,

West, which as to me it seems cannot be, since that which to us is *East*, is *West* to our *Antipodes*, and that which is *East* to them, is *West* to us.

3. That a man hath a Natural speech of his own, as he is a man, (some think *Hebrew*) which Language he could speak by Nature if he were not taught some other: but this is a Dream, and hath as *Herodotus Lib.* 6. been twice confuted by a double experiment. The first was by *Psammeticus* a King of *Ægypt*, who desiring to understand which was Mans most Ancient and Natural Language, caused two Children to be sequestred from all society of Men, and to be nourished by two she *Goats*, forbidding all speech unto them: which the Children continuing for a long time Dumb, at last uttered *Bec*, *Bec*: The King being informed, that in the *Phrigian* Language *Bec* signified Bread, imagined the Children called then for Bread; and from thence collected that because they spake that Language which no man had taught them, therefore the *Phrigian* Language was the Natural speech of Man. A weak proof and silly conceit. For the Childrens *Bec* (as is probably collected) was only that Language which they learned of their Goat-Nurses, when they came to suck their Tetts, who receiving from them some ease by their sucking, saluted them with *Bec*, the best Language they had, from whom the Children

dren learned it; and ſo much as they heard, ſo much juſt they uttered, and no more: and if they had not heard it, they could never have pronounced it, as we may evidently ſee in men that are born Deaf; and by another experiment tryed upon other Infants, (which is our ſecond inſtance) *Purchas* mentions it in his Pilgrims, *Lib.* 1. *Cap.* 8. tryed by *Melabdim Elchehar*, whom they call the great *Mogore* or *Mogul*. He likewiſe upon the forenamed Errour, That a Man hath a certain proper Language by Nature, cauſed thirty Children to be brought up in dumb ſilence, to find out the Experiment, whether all of them would ſpeak one and the ſame Language, having inwardly a purpoſe to frame his Religion according to that Nation, whoſe Language ſhould be ſpoken, as being that Religion which is purely Natural to Man. But the Children proved all Dumb, though they were ſo many of them, and therefore they could not ſpeak, becauſe they were not taught: whereby it appeareth, that the ſpeaking of any Language is not in Man by Nature; the firſt Man had it by Divine Infuſion, but all his Poſterity only by Imitation.

4. In *Philoſophy* it is commonly received, that the Heart is the ſeat and ſhop of the Principal Faculties of the Soul: Nay, Divine Scripture applying it ſelf to the ordinary Opinion

Opinion therein, in many places Attributes Wisdom and Understanding to the Heart: Whereas the noble pair of Physitians *Hipocrates* and *Galen* have made it evident by experimental proofs, that those Divine Powers of reasoning and discourse are seated in the brain, in as much as they are never hindred by the Distemper of the Heart, but of the Brain, nor recovered, being lost, by Medicaments applyed to the Heart, but to the Brain.

5. That the Radical Moisture, and primogenial heat naturally ingrafted in us wastes always by degrees from the time of our Conception, as Oyl in a Lamp, or Wax in a Taper: whereas till we come to the age of Consistence, we still grow in bulk, in strength, and stature: which, for my own part I cannot conceive how it should be, if from our Infancy, our Natural heat and moisture still decreased.

6. That one hand by Nature is more useful and properly made for Action then the other: whereas we find no difference betwixt the two Eyes, the two Ears, the two Nostrills; and if Men were left to themselves, as many I think, if not more, would use the left hand, as now by education and custom do the right: And in truth I am of Opinion that God and Nature have given us two hands,

hands, that we ſhould uſe both indifferently, that if need required, the one might ſupply the loſs or defect of the other. Such would *Plato* have the Citizens of his Commonwealth to be, and ſuch I do take thoſe ſeven hundred *Benjamites* to have been mentioned in the 20th. of *Judges*; and if either hand ſhould in Nature be preferred before the other, methinks in reaſon it ſhould be that next the Heart, the Fountain of Life and Activity.

Secondly in Hiſtory, which is Eccleſiaſtical, Civil, or Natural. To begin with that of Eccleſiaſtical.

1. It is commonly received, that *Simon Peter* encountred with *Simon Magus*, and that the Magician undertaking to fly up into the Air, the Apoſtle ſo wrought by Prayer and Faſting, that he came tumbling down and brake his Neck: But of this ſtory ſaith *St. Auguſtine*, in his *Epiſt.* 86. *Conſulano, eſt quidem & hæc Opinio plurimorum, quanvis eam perhibeant eſſe falſam plerique Romani*: Many are of this Opinion, yet moſt of the *Roman* Writers would have it but a Tale. And in another place he calls it *Græciam fabulam*, an invention of the *Grecians*, who were ſo fruitful in theſe kind of Fables, that *Pliny* himſelf could ſay of them, *Hiſt. Nat. Lib.* 8. 22. *Mirum eſt quo procedat Græca credulitas, nullum tam impudens mendacium eſt ut teſte careat*; it is a wonder to

ſee

ſee whether the credulity of the *Greeks* carry them, there being no lye ſo ſhameful, but it findes a Patron amongſt them: nay, *Juvenel* the very Latin Poet took notice of their immoderate liberty this way, *Juven. Sat.* 10.

——*Et quicquid Græcia mendax*
Audet in Hiſtoria.

What dares not Lying *Greece*
inſert in Hiſtories.

2. That *St. George* was a Holy Martyr, and that he Conquered the *Dragon*; Whereas *Dr. Reynolds de Eccl. Rom. Idol. Lib.* 10. *Cap.* 50. Proves him to be both a wicked man and an *Arrian*, by the Teſtimony of *Epiphanius*, *Athanatius* and *Gregory Naziazen*: and *Baronius* himſelf in plain terms affirms, *Apparet totam illam de Actis Georgii fabulam fuiſſe commentum Arrionum*, It appears that the whole ſtory of *George* is nothing elſe but a forgery of the *Arrians*; yet was he received (as we know) as a Canonized *Saint* through Chriſtendom, and to be the Patron both of our Nation, and of the moſt honourable Order of *Knighthood* in the World.

13. That the *Wise-men* that came out of the *East* to Worship our *Saviour*, were Kings, and from hence (their bodies being Translated to *Cullen*) they are at this day commonly called the three Kings of *Cullen*, and the day Consecrated to their Memory, is by the *French* termed *Le jour de Trois Rois*, The day of the Three Kings. Yet *Mantuan* a Monk, fears not to declare his Opinion to the contrary, and gives his reason for it.

Nec Reges ut opinor erant, neque enim tacuissent
Historiæ Sacræ Authores; Genus illud honoris est
Inter Mortales quo non sublimius ullum,
Adde quod Herodus, ut magnificentia Regum
Postulat, hospitibus tantis regale dedisset
Hospitium, secumque Lares duxisset in amplos.

Had they been Kings, not holy History
Would have concealed their so great Majesty,
Higher on which on Earth none can be named;
Herods Magnificence would sure have framed

Some

Some entertainment fitting their Estates,
And harbour'd them within his Royal
Gates.

4. That the *Sybills* clearly foretold touching the Name of the forerunner, the Birth and Death of Christ, the coming of Antichrist, the overthrow of *Rome*, and the consummation of the World, which notwithstanding, (as *Causabon* hath learnedly observed) seems to be contrary to the Word of God, that so profound Mysteries should be revealed to the *Gentiles*, so long before the Incarnation of Christ; especially since they write more plainly and particularly of those matters then the Prophets of God themselves amongst the *Jews*; and the greatest Clarks amongst the *Gentiles Plato*, *Aristotle*, *Theophrastus*, and others curious searchers into all kind of Learning, never so much as once mention either their Names or their Writings, nor any of their Mysteries. While the Church of Christ was yet in her Infancy, many such kind of Books were forged, thereby to make the Doctrine of the Gospel more passible among the *Gentiles*; and no marvel then that these of the *Sybills* passed for current amongst them.

1. In Hiſtory Civil or National, it is commonly received, that there were four, and but four *Monarchies* ſucceeding one the other; the *African*, the *Perſian*, the *Grecian*, and the *Roman*; yet *John Bodwin*, a man of ſingular Learning, eſpecially in matter of Hiſtory, dares thus to begin the ſeventh Chapter of his *Method*. *Inveteratus error de quatuor Imperiis, ac magnorum virorum opinione pervulgatus, tam alte radices egit, ut vix evelli poſſe videatur*, That inveterate errour of Four *Empires* made famous through the Opinion of great Men, hath taken ſuch deep roots, as it ſeems it can hardly be pluckt up; and thorow a great part of that Chapter labours he the confutation of thoſe that maintain that Opinion.

2. That *Brute*, a *Trojan* by Nation, and a great Grand-child to *Æneas*, arrived in this Iſland, and gave it the Name of Great *Britain* from himſelf, here Reigned, and left the Government thereof divided amongſt his three Sons, *England* to *Loegrius*, *Scotland* to *Albanak*, and *Wales* to *Camber*: Yet *Camden* our great *Antiquary*, *Brit. de primis Incolis*, beating (as he profeſſeth) his Brains and bending the force of his Wits to maintain that Opinion, he found no warrantable ground for it. Nay by forcible Arguments (produced as in the perſon

perſon of others diſputing againſt himſelf) he ſtrongly proves it, (in my judgment) altogether unwarrantable and unſound. *Boccace*, *Vives*, *Adricamus*, *Junius*, *Poliderus*, *Vignier*, *Genebrard*, *Molinæus*, *Bodine*, and other latter Writers of great account, are all of opinion, that there was no ſuch man as this ſuppoſed *Brute*: And amongſt our own Ancient Chronicles, *John* of *Wethamſted*, Abbot of *St. Alban*, holdeth the whole Narration of *Brute* rather to have been *Poetical* then *Hiſtorical*, as you ſhall find in his *Granario* 1440. which methinks is agreeable to reaſon, ſince *Cæſar*, *Tacitus*, *Gildas*, *Ninius*, *Bede*, *William* of *Malmesbury*, and as many others as have written any thing touching our Country before the year 1160. make no mention at all of him. The firſt that ever broached it was *Geffery* of *Monmouth* about Four hundred years ago, during the Reign of *Henry* the Second, who publiſhing the *Britiſh* ſtory in *Latin*, pretended to have it taken out of Ancient Monuments written in the *Britiſh* Tongue: but this Book as ſoon as it peeped forth into the Light, was ſharply cenſured both by *Giraldus Cambrenſis*, and *William* of *Newberry* who lived at the ſame time; the former terming it no better then *Fabuloſam Hiſteriam*, a fabulous Hiſtory, and the latter *Ridicula Figmenta*, ridiculous Fictions, and it

now ſtands branded with a black cole amongſt the Books prohibited by the Church of *Rome*.

3. That the *Saxons* called the remainder of the *Brittains*, *Welch*, as being ſtrangers to them: Whereas that Word ſignifies not as ſtrangers either in the high or low *Dutch*, as *Verſtigan*, a man skilful in thoſe Languages, hath obſerved; and that the *Saxons* gave them the name of *Welch*, after themſelves came into *Brittain*, is altogether unlikely: For that, inhabiting ſo neer them as they did, to wit, but over againſt them on the other ſide of the Sea, they could not want a more particular and proper Name for them, then to call them Strangers. It ſeems then to be more likely, that the *Romans* being Originally deſcended from the *Gaules*, the *Saxons* according to their manner of ſpeech, by turning the *G.* into the *W.* and inſtead of *Galliſh* called them *Walliſh*, and by a breviation *Walch* or *Welch*, as the *French* at this day call the Prince of *Walles*, *Prince de Galles*.

4. That the *Pigmies* are a Nation of People not above two or three foot high, and that they ſolemnly ſet themſelves in Battail array to fight againſt the *Cranes*, their greateſt Enemies:

mies: of these notwithstanding *Casanion* in his Book *De Gigantibus, Cap. Ultimo*, saith, *Fabulosa illa omnia sunt quæ de illis, vel Poeta, vel alii Scriptores tradiderunt*: All those things are Fabulous, which touching them either the Poets or other Writers have delivered. And with him further accordeth *Cardan, De rerum varietate* Cap. 4. *Apparet ergo Pigmiorum Historiam esse fabulosam, quod & Strabo sentit, & nostra ætas, cum omnia nunc firmè orbis mirabilia innotuerint, declarat.* It appeares then that the History of the *Pigmies* is but a Fiction, as both *Strabo* thought, and our age, which have now discovered all the wonders of the World, fully declares. *Gellius* also, and *Rodogin* refer those *Pigmies*, if any such there be, to a kind of *Apes*.

1. In Natural History, (to pass by that Vulgar Errour of the *Phœnix*, so learnedly refuted by one of our late Writers,) I shall here first gainsay that grosse Opinion, that the Whelps of *Bears* are at first littering without all form or fashion, and nothing but a little congealed Blood, or lump of Flesh, which afterwards the Dam shapeth by licking; yet is the Truth most evidently otherwise, as by the Eye-witness of *Joachimus Rheticus*, *Gesner*, and others it hath been proved. And herein, as in many

other fabulous Narrations of this Nature, (in which experience checks report) may we justly put that of *Lucretius*,

——*Qui nobis certius ipsis*
Sensibus esse potest, quo vero & falsa notemus?

What can more certain be then sence,
Discerning truth from false pretence.

2. That *Swans* a little before their Death sing most sweetly, of which notwithstanding *Pliny Hist.* 10. 23. thus speaks, *Olorum morte narratur flebilis cantus, falso ut arbitror aliquot experimentis.* *Swans* are said to sing sweetly before their Death, but falsly, as I take it, being led so to think by some experiments. And *Scaliger*, *Exercitat.* 23. To the like purpose, *de Cygni verò cantu suavissimo quem cum Mendaciorum parente* Græcia *jactare ausus & ad Luciani tribunal, apud quem aliquid novi dicas, statuis.* Touching the sweet singing of the *Swan*, which with *Greece* the Mother of Lies you dare to Publish; I cite you to *Lucians* Tribunal there to set abroach some new stuff. And *Ælian*, Lib. 10. 14. *Cantandi studiosos esse*

jam

jam communi ſermone peruulgatum eſt: ego vero cygnum nunquam audivi canere, fortaſſe neque alius. that *Swans* are skillful in ſinging is now rife in every mans mouth, but for my ſelf I never heard them ſing, and perchance no man elſe.

3 That the *Mole* hath no eyes, nor the *Elephant* knees; both which notwithſtanding by daily and manifeſt experience are found to be untrue.

4 That the *Bever* being hunted and in danger to be taken, biteth off his Stones, knowing that for them his Life only is ſought, and ſo often eſcapeth; hence ſome have derived his name *Caſtor a Caſtrando ſeipſum*, from gelding himſelf: and upon this ſuppoſition the *Ægyptians* in their *Hieroglyphicks*, when they will ſignifie a man that hurteth himſelf, they picture a *Bever* biting off his own Stones, though *Alciat* in his *Emblems* turnes it to a contrary purpoſe, teaching us by that example to give away our purſe to theeves rather then our lives, and by our Wealth to redeem our danger. But this relation touching the *Bever* is undoubtedly falſe, as both by ſence and experience, and the teſtimony of *Dioſcorides*, *Lib.* 3. *Cap.* 13. is manifeſted. Firſt, becauſe their ſtones are very ſmall, and ſo placed

in

in their bodies as are a *Bever*, and therefore impossible for the *Bever* himself, to touch or come by them; and Secondly, they cleave so fast unto their back, that they cannot be taken away, but the Beast must of necessity lose his Life; and consequently most ridiculous is their Narration, who likewise affirm, that when he is hunted, having formerly bitten off his stones, he standeth upright, and sheweth the Hunters that he hath none for them, and therefore his Death cannot profit them, by means whereof they are averted and seek for another.

5. That the *Hare* is one year a Male, and another a Female; whereas *Rondeletius* affirms, that they are not stones which are commonly taken to be so in the Female, but certain little bladders filled with matter, such as are upon the belly of a *Bever*, wherein also the Vulgar is deceived, mistaking (as I should before have taken notice) these for stones as they do these; Now the use of these parts both in *Bevers* and *Hares* is this, that against Rain both the one and the other Sex suck out a certain humour, and anoint their bodies all over therewith, which serves them for a kind of a defence against Rain.

6. That,

6. That a *Salamander* lives in the Fire, yet both *Galen* and *Dioscorides* refute this Opinion. And *Mathiolus* in his commentaries upon *Dioscorides*, a very famous Physitian, affirms of them, that by casting of many *Salamanders* into the Fire for tryal, he found it false. The same experiment is likewise avouched by *Foubertus*.

7. That a *Wolfe*, if he see a man first suddenly strikes him dumb, whence comes the Proverb, *Lupus est in fabula*, and that of the Poet,

Lupi Mærim videre priores.

The Wolves saw Mæris *first.*

Yet *Philip Camerarius* professeth, *fabulosum esse quod vulgo creditur hominem a Lupo prævisum, subito consternari & vocem amittere.* That it is fabulous which is commonly believed, that a Man being first seen of a *Wolfe* is thereupon astonished and looseth his voice: And that himself hath found it by experience to be a vain Opinion; which *Scaliger* likewise affirms upon the same ground. *Utinam tot ferulis castigantur mendaciorum assertores isti, quot a Lupis*

visi

visi sumus sine jactura vocis: I wish those Patrons of Lies were chastised with so many blows, as at sundry times I have been seen of *Wolfes* without any loosing of my voice.

8. That men are sometimes transformed into *Wolves*, and again from *Wolves* into men: touching the falsehood whereof *Pliny* himself is thus confident, *Nat. Hist. Lib.* 8. *Cap.* 22. *Homines in Lupos verti rursumque restituti sibi, falsum esse confidenter existimare debemus, aut credere omnia quæ fabulosa tot seculis comperimus*: That menare changed into *Wolves*, and again restored to themselves, that is to the shape of men, we ought assuredly to believe false, or give credit to whatsoever we have found fabulous, through the course of so many ages. Now that which hath given occasion to this opinion might be as I suppose either an illusion of *Satan* in regard of the beholders, or a strong melancholy imagination in the patients, or the education of men amongst *Wolves* from their very infancy. For that the Devil can at his pleasure transsubstantiate or transform one substance into another, I hold it no sound Divinity.

9. That the *Mandrakes* represent the parts and shape of a Man: yet the same *Matthiolus*

in his *Commentary* upon *Dioſcorides*, affirms of them, *Radices porro Mandragoræ humanam effigiem repreſentare, ut vulgo creditur, fabuloſum eſt*: That the Roots of the *Mandrake* repreſent the ſhape of a Man, as it is commonly believed is fabulous, calling them cheating knaves and quack-ſalvers that carry them about to be ſold, therewith to deceive barren Women.

10. That the *Pelican* turneth her beak againſt her breſt, and therewith pierceth it till the blood guſh out, wherewith ſhe nouriſheth her young: whereas a *Pelican* hath a beak broad and flat, much like the ſlice of Apothecaries and Chirurgions, wherewith they ſpread their Plaiſters, no way fit to pierce, as *Laurentius*, *Gubertus*, Counſellor and Phyſitian to *Henry* the Fourth of *France*, in his book of popular Errors hath obſerved.

11. That *Vipers* in their Birth kill their Mother of whom they are bred; *Scaliger* out of his own experience aſſures the contrary: *Viperas*, ſaith he, *ab impatientibus moræ fœtibus Numeroſiſmis, atque idcirco erumpintibus rumpi atque interire falſum eſt ſcimus, qui in Vincentii Camerini Ligneatheca videmus enatas viperillas parente ſalva*: That *Vipers* are rent and ſlain by the number of their young ones, impatient of delay,

lay, and striving to get forth, we know to be false, who in a wooden box belonging to *Vincentius Camerinus* have seen the young ones newly brought forth, together with the old one, safe and sound. True it is that the *Viper* bringing sometimes twenty or more, and being but delivered of one a day, the hindermost impatient of so long delay sometimes gnaws through the tunicle or shell of the Egge in which they are incloſed, and cometh forth with part of it upon them, which *Aristotle* affirming, thereupon it seems hath grown the mistake, that they gnaw through the belly of their Dam, which is undoubtedly false. The derivation then of the Word *Vipera* being *Quasi vi pariens*, is but a trick of wit, grounded upon an Erroneous suſpicion; It being rather (as I conceive) from *viuum pariente*, there being no other kind of *Serpent* that bringeth forth her young hatched out of an Egge, but only the *Viper*. For the Readers ampler and fuller satisfaction in such curioſities, I referr him to *Doctor Browns* Learned diſcourſe of the Errors of the Vulgar.

For though I might give many more instances both in Philoſophy and Hiſtory, to shew that it is a thing neither new nor unjustifiable by the practice of Wiſemen, to examine and

and impugne received Opinions, if they be found Erroneous; Nevertheleſs for the preſent, Let it ſuffice (that amongſt many others throughout this Treatiſe) I have alſo removed theſe few ſtumbling blocks out of the way. I ſhall next make good my promiſe according to the brevity of my former Method, to treat of the decay of the Powers of the minde in the Arts and Sciences, their helps and hindrances in matter of Learning, ballanced; as alſo that there is both in Wits and Arts, as in all things beſides, a kind of a circular progreſs, as well in regard of places as times, that they have their riſe and fall, increaſe and decreaſe, and ſo through the Divine aſſiſtance I ſhall ſet a period to this diſcourſe.

Since it is a received concluſion of the choiceeſt, both Divines and Philoſophers, that the reaſonable Soul of Man is not converted into him by his Parents, but infuſed immediately by the Creatour, and withall that the Souls of all men, at their firſt Creation and Infuſion, are equal and perfect alike, endued with the ſame Eſſence and abilities, it muſt needs be, that the inequality and diſparity of actions, which they produce, ariſe from the diverſe temper of the matter which they informe, and by which, as by an inſtrument they work.

Now

Now the matter being tempered by the disposition of the bodies of our Parents, the influences of the Heavens, the quality of the Elements, Diet, Exercise, and the like, it remains, that as there is a variety and Vicissitude of these in regard of goodness, so is there likewise in the temper of the matter whereof we consist, and the actions which by it our Souls produce: yea, where both the Agents and the instruments are alike, yet by the diversity of education and Industry, their works are many times infinitely diversified.

The principal faculties of the Soul are Imagination, Judgment, and Memory. One of the most famous for Memory amongst the Ancients, was *Seneca* the Father, who reports of himself *Proæmio, Lib.* 1. *Controver.* That he could repeat a thousand names, or two hundred verses, brought to his Master by his School-fellows backwards or forwards. But that which *Muretus Lib.* 3. *Variar. Lection.* reports of a young Man of *Corsica*, a Student in the Civil Law, whom himself saw, at *Padua*, far exceeds it: he could, saith he recite Thirty thousand Names in the same order as they were delivered, without any stop or staggering, as readily as if he had read them out of a Book: his conclusion is *Huic ego nec*

ex

ex antiquitate quidam, quem opponam habeo, nisi forte Cyrum, quem Plinius, *Quintilianus, & alii Latini Scriptores tradiderunt tenuisse omnium militum nomina*: I find none among the Ancients, whom I may set against him, unless *Cyrus* perchance, whom *Pliny*, *Quintillian*, and other Latin Writers, report to have remembred the names of all his Souldiers, which yet *Muretus* himself doubts was mistaken of them. *Zenophon*, of whom only or principally they could learn it, affirming only that he remembred the names of his principal Captains, or chief Commanders. And *Æneus Sylvius*, in his History of the Council of *Basil* (at which himself was present) tells us of *Lodovicus Pontanus* of *Spoleta*, a Lawyer likewise by Profession, (who dyed of the *Pestilence* at the Council, at Thirty years of age) that he could recite not the Titles only, but the intire Bodies of the Laws, being for vastness and fastness of Memory, *Nemini Antiquorum inferior*, as he speaks, nothing inferiour to any of the Ancients. *Famianus Strada*, in his first Book of *Academical Prolusions*, relates of *Francis Suarez*, who had, saith he, so strong a Memory, that he had *St. Augustine* (the most copious and various of the Fathers) ready by heart, alledging every where (as occasion presented it self) fully and faithfully, his

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ix

ex antiquitate quidam, quem opponam habeo, nisi forte Cyrum, quem Plinius, *Quintilianus, & alii Latini Scriptores tradiderunt tenuisse omnium militum nomina*: I find none among the Ancients, whom I may set against him, unless *Cyrus* perchance, whom *Pliny*, *Quintillian*, and other Latin Writers, report to have remembred the names of all his Souldiers, which yet *Muretus* himself doubts was mistaken of them. *Zenophon*, of whom only or principally they could learn it, affirming only that he remembred the names of his principal Captains, or chief Commanders. And *Æneus Sylvius*, in his History of the Council of *Basil* (at which himself was present) tells us of *Lodovicus Pontanus* of *Spoleta*, a Lawyer likewise by Profession, (who dyed of the *Pestilence* at the Council, at Thirty years of age) that he could recite not the Titles only, but the intire Bodies of the Laws, being for vastness and fastness of Memory, *Nemini Antiquorum inferior*, as he speaks, nothing inferiour to any of the Ancients. *Famianus Strada*, in his first Book of *Academical Prolusions*, relates of *Francis Suarez*, who had, saith he, so strong a Memory, that he had *St. Augustine* (the most copious and various of the Fathers) ready by heart, alledging every where (as occasion presented it self) fully and faithfully, his

Sentences, and which is ſtranger, his very words; nay, if he demanded any thing touching any paſſage in any of his Volumes (which of them will make a great ſhew towards the filling of a Library) *Statim quo loco, quaque pagina diſſeruerit ea ſuper re expedite docentem ac digito commonſtrantem ſæpè vidimus*: I my ſelf have often ſeen him inſtantly ſhewing and pointing with his Finger, to the place and Page in which he diſputed of that Matter; this is, I confeſs, the Teſtimony of one *Jeſuit* touching another, but of *Dr. Rainolds*, it is moſt certain, that he excelled this way, to the aſtoniſhment of all that were inwardly acquainted with him, not only for St. *Auguſtines* works, but alſo all Claſſick Authors: ſo that as in this reſpect it might truly be ſaid of him, which hath been applyed to ſome others, that he was *a living Library, or a third Univerſity*: for it hath been very credibly reported of him, that upon occaſion of ſome writings which paſſed to and fro, betwixt him and *Dr. Gentilis*, then a profeſſour in our Civil Laws, he publickly profeſſed, that he thought *Dr. Reynolds* had read, and did remember more of thoſe Laws then himſelf, though it were his Profeſſion, in which he admirably excelled.

And

And for the excellency of the other faculties of the Mind, together with that of the Memory, it is a wonderful Teſtimony that *Vives* (a Man of eminent parts) in his Commentaries on the ſecond Book, and 17. *Cap. de Civit. Dei*, gives *Budæus*; *Quo viro*, (ſaith he) *Gallia accutiore ingenio, acriore judicio, exactiore diligentia, majore eruditione vullum nunquam produxit, hac vera etate nec* Italia *quidem*; then which man, *France* never brought forth a ſharper wit, or pierceing judgment, of more exact diligence, or greater Learning, nor in this age *Italie* it ſelf: And then going on tells us, that there was nothing written in *Greek* or *Latin*, which he had not turned over, read and examined; *Greek* and *Latin* were both alike to him, yet was he in both moſt excellent, ſpeaking either of them as readily, and perchance with more eaſe then the *French*, his Mother Tongue; he would read out a *Greek* Book in *Latin*, and out of the *Latin* Book into *Greek*. Thoſe things which we ſee ſo exquiſitely written by him, flowed from him *ex tempore*; he writ more skilfully both in *Greek* and *Latin*, then (as he affirms) the moſt skilfull in thoſe Languages underſtand. Nothing in thoſe Tongues being ſo abſtruce and difficult, which he had not ranſacked, entred upon, looked into, and

brought as it were another *Cerberus* from Darkneſs to Light. Infinite are the ſignifications of Words, the Figures, and proprieties of ſpeech, which unknown to former Ages, by the only help of *Budæus*, ſtudious men are now acquainted with. And theſe ſo great and admirable things, he without the direction of any Teacher, learned meerly by his own induſtry; *Fælix & fœcundum ingenium, quod in ſe uno invenit & doctorem & diſcipulum, & docendi viam rationemque, & cujus decimam partem, alii ſub magnis Magiſtris vix diſcunt, ipſe id totum a ſe Magiſtrum edoctus eſt*: An happy and fruitful Wit, which in himſelf alone found both a Maſter and a Scholler, and a method of teachings; and the tenth part of that which others can hardly attain unto under famous Teachers, all that learned he of himſelf, being his own Reader. And yet (ſaith he) hitherto have I ſpoken nothing of his knowledg in the Laws, which being in a manner ruined, ſeem by him to have been reſtored; nothing of his Philoſophy, whereof he hath given us a tryal in his Book *de Aſſe*, that no man could compoſe them, but ſuch a one as was aſſiduouſly verſed in all the books of the Philoſophers; and then having highly commended him for his piety, his ſweet behaviour,

behaviour, and many other rare and ſingular Vertues added to his greatneſs, he farther adds, notwithſtanding all this, that he was continually converſant in domeſtick and ſtate Affairs at home, and Ambaſſages abroad; for it might truly be ſaid of him, As *Plinius Cæcilus* ſpeaks of his *Vnde Secundus*, when I conſider his State Affairs, and the happy diſpatch of ſo many buſineſſes, I wonder at the multiplicity of his Reading and Writing; and again, when I conſider this, I wonder at that and ſo leave him with that happy diſtick of *Buchanan*.

Gallia quod Græca eſt, quod Græca barbara noneſt,
Vtraque Budæo debet utrumque ſuo.

That *France* is turn'd to *Greece*, that *Greece* is not turnd rude,
Both owe them both to thee, their dear great learned *Bude*.

And if we look over the *Peryneeus*, *Metamorus*, in his Treatiſe of Univerſities and learned men of *Spain*, he ſpares not to write

of *Toſtatus* Biſhop of *Abulum*, *ſi alio quam ſuo ſeculo vivere contigeſſet, neq; Hipponi Auguſtinum, neq; Stridoni Hieronymum, nec quempiam ex illis præceribus Eccleſiæ antiquis nunc inviderimus*: had he lived any other age ſave his own, we ſhould not have needed now either to envy *Hippo* for *Auguſtin*, or *Stridon* for *Hierom*, nor any other of thoſe ancient Worthies of the Church: To which *Poſſevin* in his *Apparatus* adds, that at the age of two and twenty years, he attained to the knowledge of almoſt all Arts and Sciences. For beſides Philoſophy and Divinity, the Canon and Civil Laws, Hiſtory and the Mathematicks, he was skill'd in the *Greek* and *Hebrew* Tongues: ſo as that it was written of him,

Hic ſuper eſt Mundi, qui ſcibile diſcutit omne.

The Worlds wonder for that he,
Knows whatſoever known may be.

He was ſo true a ſtudent, and ſo conſtant in ſitting to it, that with *Didymus* of *Alexandria*, *Æneæ habuiſſe inteſtina putaretur*, he was thought

thought to have a body of Braſs, and ſo much he wrote and publiſhed, that a part of the Epitaph ingraven on his Tomb was;

Primæ natalis Luci folia omnia adaptans
Nondum ſic fecerit pagina trina ſatis;

The meaning is, that of his publiſhed Writings, we ſhall allow three leaves to every day of his Life from his very Birth, there would be yet ſome to ſpare; and yet withal he wrot ſo exactly, that *Ximenes* his Scholler, attempting to contract his *Commentaries* upon *Mathew* could not well bring it into leſs then a thouſand leaves in Folio, and that in a very ſmall Print; and others have attempted the like in his other works with like ſucceſs. But that which *Paſquier* hath obſerved out of *Monaſteries Lib.* 56. 38. Touching a Young Man, who being not above twenty years old, came to *Paris* in the year 1445, and ſhewed himſelf ſo admirably excellent in all Arts, Sciences, and Languages, that if a man of an ordinary good wit and ſound conſtitution ſhould live one hundred years, and during that time (if it were poſſibly) ſtudy inceſſantly, without eating

ing, drinking, ſleeping, or any other recreation, he could hardly attain to that perfection: inſomuch that ſome were of opinion, that he was *Antichriſt* begotten of the Devil, or ſomewhat at leaſt above humane condition; which gave occaſion to theſe verſes of *Caſtellanus*, who lived at the ſame time, and himſelf ſaw this Miracle of Wit.

I'ay veu par excellence
Vn jeune de Vinge ans
Avoir toute Science & les degrees montans
Soy ſe vantant ſcavoir dire
Cequ' onques fut eſcrit
Par ſeule fois le Lire
Comme jeune Antichriſt.

A young Man have I ſeen
At twenty years ſo skill'd,
That every Art he had, and all
In all degrees excell'd.
What ever yet was writ
He vaunted to pronounce
Like a young Antichriſt, if he
Did read the ſame but once.

Not

Not to inſit upon Supernaturals; were there among us that induſtry, and the union of forces, and contribution of helps, as was in the Ancients, I ſee no ſufficient Reaſon but the Wits of this preſent Age might produce as great Effects as theirs did, nay greater, inaſmuch as we have the Light of their Writings to guide and aſſiſt us: we have books by reaſon of the Art and Myſtery of *Printing* more familiar, and at a cheaper rate: moſt men being now unwilling to give Three hundred pounds for three Books, as *Plato* did for thoſe of *Philolaus* the *Pithagorean*. And by this means are we freed from a number of groſs Errours, which by the ignorance or negligence of unskilfull Writers crept into the Text: yet on the other ſide it is as true that we are forced to ſpend much time in the learning of Languages, eſpecially the *Latin*, *Greek*, and *Hebrew*, which the Ancients ſpent in the ſtudy of things, their learning being commonly written in their own Language. Beſides the infinite and bitter controverſies amongſt Chriſtians in matters of Religion ſince the Infancie thereof even to theſe preſent times, hath doubtleſs not a little hindered the progreſs and advancement of other Sciences.

Likewiſe

Likewiſe it cannot be denyed, but that the incouragements for the ſtudy of Learning were in former times greater. What liberal and bountiful allowance did *Alexander* afford *Ariſtotle*, Eight hundred Talents for the entertainment of Fiſhers, Faulkners and Hunters to bring him in Beaſts, Fowls, Fiſhes of all kinds, and for the diſcovery of their ſeveral natures and diſpoſitions: Nay, the daily wages of *Roſcius* the Stage-player, as witneſſeth *Macrobius*, in his *Saturnal Lib.* 3. *Caps* 14. was a thouſand *Denarii* which amounteth to Thirty pounds of our Coyn. And *Æſop* the *Tragedian* by the only exerciſe of the ſame Trade, if we may credit the ſame Author, that he left his Son above One hundred and fifty thouſand pounds Sterling, whereunto may be added, that the Ancients copying out their Books, for the moſt part with their own hand, it could not but work in them a deeper impreſſion of the matter therein contained, and being thereby forced to content themſelves with fewer Books, of neceſſity they held themſelves more cloſely to them. And it is true what *Seneca* ſaith, as well in reading as eating, *Varietas delectat, certitudo prodeſt*, Variety is delightful, but certainty more uſeful and profitable.

So

So that upon the matter, reckonings caſt up on all ſides, and one thing being ſet againſt another, as we want ſome helps which the Antients had, ſo we are freed from ſome hindrances wherewith they were incumbred; as again it is moſt certain, that they wanted ſome of our helps, and were freed from ſome of our hindrances: if then we come ſhort of their perfections, it is not becauſe Nature is generally defective in us, but becauſe we are wanting to our ſelves, and do not ſtrive to make uſe of, and improve thoſe abilities wherewith God and Nature hath endowed us. *Male de Natura ce ſentit quicunque uno illam aut altero partu effatum eſſe arbitratur*, ſaith *Vives*; He thinks unworthily and irreverently of Nature who conceives her to be barren after one or two Births; No, no, that which the ſame Author ſpeaks of places, is likewiſe undoubtedly true of times, *Ubique bona naſcuntur ingenia, excolantur modo, alibi forteſſis frequentiora, ſed ubique nonnulla.* Every where and in all ages good Wits ſpring up, were they dreſſed and manured as they ought, though happily more frequently in ſome places and ages then others. *Scythia* it ſelf anciently yielded one *Anacharſis*. And no doubt had they

they taken the ſame courſe as he did, more of the ſame Metal would have been found there.

There is (it ſeems) both in Wits and Arts, as in all things beſides, a kind of circular progreſs: they have their Birth, their growth, their flouriſhing, their failing, and fading, and within a while after their Reſurrection, and reflouriſhing again. The Arts flouriſhed for a long time amongſt the *Perſians*, the *Caldeans*, the *Ægyptians*, and therefore is *Moſes* is ſaid to be learned in all the wiſdom of the *Ægyptians*, who well knowing their own ſtrength, were bold to object to the *Grecians*, that they were ſtill Children, as neither having the knowledge of Antiquity, nor the Antiquity of Knowledge: But afterwards the *Grecians* got the ſtart of them, and grew ſo excellent in all kind of Knowledge, that the reſt of the World in regard of them, were reputed *Barbarians*, which reputation of wiſdom they held even till the Apoſtles time. *I am debter*, ſaith *St. Paul*, *Both to the Gracians and to the Barbarians, both to the wiſe and to the unwiſe. Rom.* 1.14. And again, *The Jews require a Signe, and the Gracians ſeek after Wiſdom*, 1 *Cor.* 1. 22. By reaſon whereof

whereof they reliſhed not the ſimplicity of the Goſpel, it ſeeming fooliſhneſs unto them: And n the ſeventeenth of the *Acts* the Philoſophers of *Athens*, (ſometimes held the moſt famous Univerſity in the World) out of the opinion of their own great Learning, ſcorned *St. Paul* and his Doctrine, terming him a ſower of Words, a very Babler or trifler: yet not long after this, theſe very *Gracians* declined much, and themſelves (whether through their own inclination, or the reaſon of their Bondage under the *Turk*, the common Enemy both of Religion and Learning, I cannot determine) are now become ſo ſtrangly Barbarous, that their Knowledge is converted into a kind of Ignorance, as is their Liberty into a contented Slavery: yet after the loſs both of their Empire and Learning, they ſtill retained ſome ſpark of their former Wit and Induſtry. As *Juvenal* hath it *Sat.* 7.

Ingenium velox; audacia perdita, ſermo
Promptus, & Iſæo torrentior, ede quid illum
Eſſe putas quemvis hominem ſecum attulit ad nos
Grammaticus, Rhetor, Geometres, Pictor, Aliptes,
Augur, Schænobates, Medicus, Magnus, omnia novit
Græculus eſuriens in Cælum juſſeris, ibit.

Quick witted, wondrous bold, well ſpoken, then
Iſæus Fluenter, who of all Men
Brought with himſelf, a Sooth-ſayer, a Phyſitian,
Magician, Rhetorician, Geometrician,
Grammarian, Painter, Ropewalker, all knows
The needy *Greek*, bid goe to Heaven, he goes.

But now they wholly delight in eaſe, in ſhades, in dancing, in drinking, and for the moſt part, no further endeavour either the enriching of their minds or purſes then their bellies compel them.

The Lamp of Learning being thus neer extinguiſhed in *Greece*,

In Latium ſpretis Accademia migrat Athenis.

Athens forſaken by Philoſophy
She forthwith travell'd into *Italy*.

It began to ſhine afreſh in *Italy* neer about the time of the Birth of Chriſt, there being a general peace thorow the World, and the *Roman* Empire fully ſetled and Eſtabliſhed, Poets, Orators, Philoſophers, and Hiſtorians, never more Excellent. From whence the Light ſpread it ſelf over Chriſtendom, and continued bright till the Inundation

undation of the *Gothes*, *Hunns*, and *Vandals*, who ranſaked Libraries, and defaced almoſt all the Monuments of Antiquity, inſomuch as that Lamp ſeemed again to be put out, for the ſpace of almoſt a Thouſand years, and had longer ſo continued, had not *Menſor* King of *Africa* and *Spain* raiſed up and ſpurred on *the Arabian* Wits to the reſtauration of good Letters by propoſing great rewards and encouragements to them. And afterwards *Petarch*, a man of ſingular Wit and rare Natural Endowments, opened ſuch Libraries as were left undemoliſhed, beat off the Duſt from the Moth-eaten Books, and drew into the Light the beſt Authors. He was ſeconded by *Boccace*, and *John* of *Ravenna*, And ſoon after by *Aretine*, *Philephus*, *Valla*, *Poggius*, *Onimbonus*, *Vergerius*, *Blondus*, and others. And thoſe again were followed by *Æneus Sylvius*, *Angelus Politianus*, *Hermolaus Barbarus*, *Marſilius Ficinus*, and that Phœnix of Learning *J. Picus* Earl of *Mirandula*, who as appears in his entrance of his Apogie propoſed openly at *Rome* Nine hundred queſtions in all kind of Faculties to be diſputed, inviting all ſtrangers thither, from any part of the known World, and offering himſelf to bear the Charges of their Travel both coming

and

and going, and during all their abode there: ſo as he deſervedly received that *Epitaph*, which after his Death was beſtowed on him.

Joannes hic jacet Mirandula, cætera norunt,
Et Tagus, & Ganges, forſan Antipodes.

Here lies *Mirandula*, *Tagus* the reſt doth know,
And *Ganges*, and perhaps the *Antipodes* alſo.

And rightly might that be verified of him which *Lucretius* ſometimes wrote of *Epicurus* his Maſter.

Hic genus humanum ingenio ſuperavit, & omnes
Præſtrinxit ſtellas exortus ut æthereus Sol.

In Wit all men he far hath over-grown,
Ecclipſing them like to the riſing Sun.

This Path being thus beaten out by theſe Heroical Spirits, they were backed by *Rodulphus Agricola*, *Reuclinc*, *Melanthon*, *Joachimus Camerarius*, *Muſculus*, *Beatus Rhenanus*, Almains; the great *Eraſmus* a *Netherlander*, *Ludovicus Vives* a *Spaniard*; *Bembus*, *Sadoletus*, *Eugubinus*, Italians, *Turnebus*, *Muretus*, *Ramus*, *Pithaus*, *Budæus*, *Amiot*, *Scaliger*, Frenchmen. Sr. *Thomas More*, and *Linaker*, Engliſhmen; And it is worth the obſerving, that about this time the ſlumbering drowzie Spirit of the *Græcians* began again to be revived and awakened in *Beſſarion*, *Gemiſtius*, *Trapenzentius*, *Gaza*, *Argyropolus*, *Calcondilus*, and others: nay, theſe very *Northern* Nations which before had given the greateſt wound to Learning, began now by way of recompence to advance the honour of it by the fame of their Studies, as *Olaus Magnus*, *Helſterus*, *Tycho Brahe*, *Frixius*, *Crumerus*, Polonians: But the number of thoſe Worthies, who like ſo many ſparkling Stars

Stars have ſince thorow Chriſtendom ſucceeded, and many of them exceeded theſe in Learning and Knowledge, is ſo infinite, that the very recital of their names were enough to fill whole Volumes: And if we deſcend to a particular examination of the ſeveral Profeſſions, Arts, Sciences, and Manufactures, we ſhall ſure find the Prædiction of the *Divine Seneca* accompliſhed, *Natural. Queſt. Lib.* 7. *Cap.* 31. *Multa venientis ævi populus ignota nobis ſciet.* The People of future Ages ſhall come to the knowledge of many things unknown to us; And that of *Tacitus* is moſt true, *Annal, Lib.* 3. *Cap.* 12. *Nec omnia apud priores meliores prioria, ſed noſtra quoque ætas multa laudis, & artium imitanda poſteris tulit*: Neither were all things in ancient times better than ours, but our Age hath left to Poſterity many things worthy of Praiſe and Imitation. I ſhall conclude with what *Ramus* writes further, and perhaps warrantably enough in his Preface. *Scholaſt. Mathemat. Majorem doctorum hominum & operum proventum ſeculo uno vidimus, quam totis antea* 14. *Majores noſtri viderunt.* We have ſeen within the ſpace of one Age, a more plentious Crop of learned Men and Works, then our Predeceſſors ſaw in fourteen next going before

before us. But our prejudice is ſo great, againſt all things poſited without the Sphere of our Knowledg; that all the advantage we can make of it, is, to condemn to the flame both Works and Authors. To acquaint Ignorance with the glory of the Heavens; the Magnitude, Diſtance, Motion and Influence of the Stars, is to preſent our ſelves guilty of that folly, never to be pardoned, by that Multitude; amongſt which, to appear wiſe, is a crime, ſo Capital, that a puniſhment, leſs, then what the good Biſhop ſuffered, for holding *Antipodes*, cannot expiate, which was no leſs than Death it ſelf. Judge then, what courage a man ought to be maſter of, that will expoſe his Judgment to Publick Cenſour. *Ceſar* and *Alexander* had not more occaſion to uſe it, then that man hath, which ſhall dare to oppoſe an Opinion, which hath Generallity and Antiquity for its guard, to tell them, (that the Eight Sphere is Sixty five millions two hundred eighty five thouſand and five hundred of miles from us; and that the leaſt Star in that Sphere is greater then the Globe we tread on,) and to maintain it amongſt the rabble, is as dangerous, as to be a *Daniel* in the Den, with the Lyons; to ſpeak of the ſeven Planets, their Natures, with the Effects that attends, their Times, Squares,

Conjunctions,

Conjunctions, and Oppoſitions, to any but the Ingenious, is madneſs it ſelf, the *Zodiack* with its *Duodeſſimo* diviſion of Signes, with their quaternal Triplicities, and the *Suns* progreſs through thoſe Signes, with the alterations that it occaſions, as to heat and coldneſs of the weather, the length and ſhortneſs of the days and nights, the flouriſh and decay of all the fruits of the Earth, aſtoniſhes Ignorance, but to the Learned, obſervation hath made the reaſon of it obvious to underſtand. The language of the Heavens, how excellent a thing it is, all that have Souls of the firſt Magnitude can witneſs. *Auguſtus* himſelf was ſo great a lover of this Science, that he cauſed the Sign *Capricorn* (it being the Aſcendant of his Nativity) to be Stamped upon his Coin, and advanced the ſame in his Standard.

Tiberius did ſo dote upon the knowledge of the Heavens, that he learnt the ſame of *Thraſillus* at *Rodes*; and indeed, the Wonders that hath been told, by thoſe that have underſtood the ſpeech of the Cœleſtials, might juſtly encourage all to the ſame Study; for how could *Gauricus* have admoniſhed *Henry* the Second, King of *France*, from Tilting in the one and fortieth year of his age, but that he read the danger of it in the Starrs; or the Biſhop of *Vienna* aſſured *Don Frederick*,

That he should be King of *Naples*, Twenty years before it happened. I could quote many more examples, of the like nature, if I thought it were to any purpose; but my dread is, that most of the Sons of Men, are so prepossest with an injury against all intelligibleness, but that which tends to the filling of their Coffers, that a truth may expect the same welcome amongst them; that a true Saviour found amongst the false *Jews*.

FINIS.

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